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JOURNAL INFORMATION

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(Editorial policy continued on inside back cover)
Cover Photo: Agkistrodon contortrix caudal luring (see p 50).

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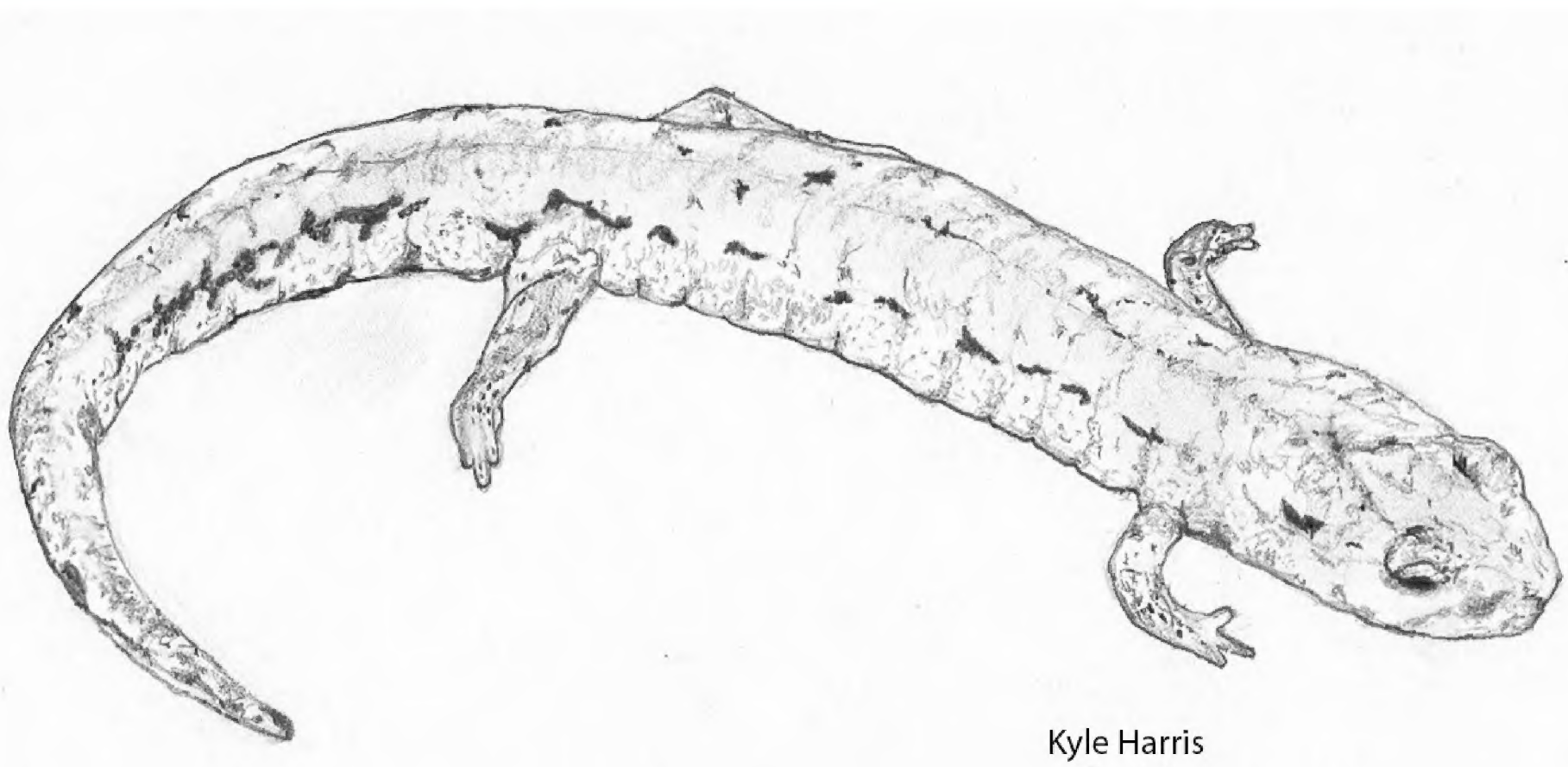

Kyle Harris

2025 Southeastern King George County Survey
Land's End Wildlife Management Area and
Rappahannock River National Wildlife Refuge (Toby's Point Unit)

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Abstract: Land's End Wildlife Management Area is a 187-hectare park in King George County with a river, wetlands, woodland habitats, and fields. The Toby's Point Unit of the Rappahannock River National Wildlife Refuge is also in King George County and is a 91-hectare preserve with woodland, swamp, vernal pools, and river habitats. The survey occurred on 7 June 2025 and had 29 participants in attendance. There were 167 individuals of 25 species of herpetofauna recorded (13 amphibians and 12 reptiles) including a county record for King George, *Sternotherus odoratus* (Eastern Musk Turtle). Of the 25 species documented, three were Virginia Department of Wildlife Resources Tiered species including: Tier IIIa *Terrapene c. carolina* (Woodland Box Turtle), Tier IVb *Chelydra serpentina* (North American Snapping Turtle), and Tier IVc *Scaphiopus holbrookii* (Eastern Spadefoot). Future small-scale, long-term surveys of the preserves could uncover additional records for King George County.

Key words: VDWR Tier IIIa, Woodland Box Turtle, VDWR Tier IVb, North American Snapping Turtle, VDWR Tier IVc, Eastern Spadefoot, King George County

INTRODUCTION

Land's End Wildlife Management Area (WMA) is a 187-hectare (462 acre) preserve in King George County with a river, wetlands, woodland habitats, and fields. The Toby's Point Unit of the Rappahannock River National Wildlife Refuge is a 147.9-hectare (365.5 acre) preserve in King George County with woodland, swamp, vernal pools,

and river habitats. Both preserves are in the Coastal Plain of Virginia (Tobey, 1985). Indicative features of Virginia's Coastal Plain would be low elevations, loamy and sandy soils, and marshy habitat (Mitchell and Reay, 1999).

Land's End WMA was established in 1966 by the Department of Wildlife Resources as a 166.7 hectare (412 acres) preserve. In 1970, the 20.2 hectare (50 acre) Salem Church Tract was added as a second tract to the WMA bringing its total land up to 187 hectares (462 acres) (Virginia Department of Wildlife Resources, 2025). For hundreds of years beforehand, the lands were originally home to the Nanzatico Indians. Starting in the 17th century, English settlement started displacing the Nanzatico tribe and by the early 18th century the remaining Nanzatico were sold into slavery in Antigua (Rappahannock Tribe, 2024). The entrance to Land's End WMA has a historical marker as a reference for these interactions that was put in place in 1972 (Department of Interior, 2017).

The Rappahannock River National Wildlife Refuge (RRNWR) was established in 1996 to conserve fish and wildlife resources (USFWS, 2025). The National Wildlife Refuge (NWR) is a collection of several preserves along the Rappahannock River with currently over 3,844.5 hectares (9,500 acres) with hopes of eventually conserving 8,093.7 hectares (20,000 acres) across King George, Caroline, Essex, and Westmoreland Counties (USFWS, 2025). The Toby's Point Unit is a 147.9 hectare (365.5 acre) tract of the RRNWR in southeastern King George County (Rappahannock Wildlife Refuge Friends, 2025). In the 1700's the area around the Toby's Point Unit housed the Bristol Iron Works (USFWS, 2025). You can see remnants such as ruins and bricks around the Toby's Point Unit.

The 2025 Southeastern King George County Survey was the first time the Virginia Herpetological Society (VHS) had conducted a survey at Land's End Wildlife Management Area and Rappahannock River National Wildlife Refuge in King George County. This was also the first time a herpetological survey has been conducted at the Toby's Point Unit (Bill Crouch, pers comm). This is also the fourth time VHS had conducted a survey in King George County – the first time being in 1983 (Hill and Pierson, 1986), in 2013 (Perry, 2013), and 2023-2024 (Neff, 2024). These previous surveys were all conducted at Caledon State Park. For this survey, Land's End WMA and RRNWR were selected since they were in the southeastern part of King George County versus Caledon State Park which is in the northcentral part of the county. Even after extensive surveys, King George County has up to 10 county records less than other surrounding counties (VHS database, 2025).

SURVEY SITES

The study sites for the 2025 Southeastern King George Survey County are listed below and can be seen in Figure 1.

Site 1 – Land's End Wildlife Management Area (38° 10'27.627"N, 77° 7'17.0904"W) This site started at the Land's End Wildlife Management area trailhead and continued south along a field and through the woods and back. It also went around the field, pond, and woods to the east and back. This area included streams, a pond, field, edge, and woodland habitat.

Site 2 – Rappahannock River National Wildlife Refuge (Toby's Point Unit) (38° 9'19.7532"N, 77° 4'16.0314"W)This site stared at the parking area of the Wilmont Boat Landing. It continued along the creek and through woodland habitat along the road

and back. This area included river shore habitat, woodland habitat, swamps, and springs.

Site 3 – Land's End (Salem Church Tract)
(38° 11'54.33"N, 77° 7'36.0186"W)

This site began at the trailhead of the Salem Church Tract of Land's End Wildlife Management Area. It continued through the woods and habitat included upland hardwood forest and steam habitats.

Figure 1. Map showing Southeastern King George County and survey sites.

METHODS AND MATERIALS

The pre-survey occurred Monday, 19 May 2025 and covered all three sites. The main survey occurred on Saturday, 7 June 2025 and participants were split into three groups. Prior to surveying, participants were informed about proper handling, surveying, and disinfection techniques of tools and footwear. Methods used to find animals included: capturing by hand or net, visual observation, listening for calling anurans, and flipping cover objects like rocks, logs, and boards. Other methods to find herpetofauna included hoop traps, crawfish traps, and minnow traps. An acoustic recorder (Wildlife Acoustics Song Meter Micro) was placed at a large vernal pool in a woodland habitat at site 2 with close proximity to a wooded, marshy creek. Observations were taken every night at 2100 hours from 6 June 2025 until 14 July 2025. During the survey, group leaders filled out standardized survey data sheets to record all animals encountered. Data sheets included information on the physical environment, weather, animal health, and microhabitat. Other data collected included: photographs of rare species, presence of disease or injury, age, and sex. Data sheets were deposited into the VHS archives.

On Monday, 19 May the temperature ranged from 20.6°C to 27.2°C with a sunny sky and no precipitation. On Saturday, 7 June the temperature ranged from 23.3°C to 26.7°C and with an overcast to sunny sky. There was a little bit of drizzle towards the end of the survey (which turned into a quick downpour shortly after the survey ended). There was a total of 126.8 person hours for the survey (Table 1).

Table 1. Summary of survey effort per site.

Survey Site	No. of Surveyors	Hours	Estimated Person Hours
P	1	4.5	4.5
1	18	4	72
2	7	4.5	31.5
3	4	4.7	18.8
Total		126.8	

RESULTS

There were 167 individual animals of 25 species of herpetofauna recorded – 13 amphibians (Table 2) and 12 reptiles (Table 3). Common and scientific names below and throughout the paper adhere to the Society for the Study of Amphibians and Reptiles (SSAR) Committee on Standard English and Scientific Names (Nicholson, 2025).

Table 2. Summary of the number of amphibians observed at each site; "R" denotes anurans observed via acoustic recorder

Sites	P	1	2	3	
Species					Total
Acris crepitans	5	3	22		30
Ambystoma maculatum		2	4		6
Ambystoma opacum				1	1
Anaxyrus a. americanus		1			1
Anaxyrus fowleri		13	6		19
Dryophytes chrysoscelis			10	1	11
Dryophytes cinereus			R		
Lithobates catesbeianus			1		1
Lithobates clamitans	8	1	6	1	16
Lithobates palustris			2		2
Lithobates sphenocephalus	5				5

Notophthalmus v. viridescens	2	4	19		25
Scaphiopus holbrookii		1	R	1	2
Total	20	25	70	4	119

Table 3. Summary of the number of reptiles observed at each site

Sites	P	1	2	3	
Species					Total
Agkistrodon contortrix			1		1
Carphophis a. amoenus		5	3	3	11
Chelydra serpentina	1				1
Chrysemys p. picta	2	1			3
Coluber c. constrictor		1			1
Nerodia s. sipedon		2	1		3
Pantherophis alleghaniensis		7		3	10
Plestiodon fasciatus	2		1		3
Sceloporus undulatus			2	1	3
Scincella lateralis			3		3
Sternotherus odoratus			1		1
Terrapene c. carolina	1	3	1	3	8
Total	6	19	13	10	48

ANNOTATED CHECKLIST

Note: for the accounts below numbers in parentheses are animals accounted for at each site listed

Amphibians

1. *Acris crepitans* (Eastern Cricket Frog) *Acris crepitans* was the most abundant amphibian encountered with a total of 30 individuals recorded. Five were observed during the pre-survey and across sites 1(3) and 2(22). All individuals were either seen or heard calling around bodies of water. Additionally at site 2, choruses of *A. crepitans* were also recorded via acoustic recorder calling from 10 June 2025 – 1 July 2025.

2. *Ambystoma maculatum* (Spotted Salamander) Six *A. maculatum* were found at sites 1(2) and 2(4). One adult found at site 2 was under a rotten log and can be seen below in Fig. 2. The remaining individuals were larvae that were found in a pond.

Figure 2. A Spotted Salamander that was found under a log at site 2.

3. *Ambystoma opacum* (Marbled Salamander) A single *A. opacum* was found at site 3. This one was a newly metamorphosed individual that was found under a log.

4. *Anaxyrus a. americanus* (Eastern American Toad) One *A. a. americanus* was found at site 1 hopping on the forest floor.

5. *Anaxyrus fowleri* (Fowler's Toad) Nineteen *A. fowleri* were seen at sites 1(13) and 2(6). The individuals at site 1 were found in high grasses or under a leaf-covered log. The *A. fowleri* observed at site 2 were hopping on the forest floor and one was found inside of a rotten log.

6. *Dryophytes chrysoscelis* (Cope's Gray Treefrog) Eleven *D. chyrsoscelis* were found at sites 2(10) and 3(1). All the *D. chrysoscelis* were recorded through auditory observations. Choruses of *D. chyrsoscelis* were also recorded via acoustic recorder at site 2 calling from 6 June 2025 to 14 July 2025.

7. *Dryophytes cinereus* (Green Treefrog) A chorus of *D. cinereus* were observed calling in the distance in a marshy, wooded habitat at site 2. They were recorded via acoustic recorder at site 2 calling from 6 June 2025 through 5 July 2025.

8. *Lithobates catesneianus* (American Bullfrog) A single *L. catesneianus* was found at site 2 in a vernal pool habitat. Additionally, *L. catesbeianus* were recorded calling via acoustic recorder at site 2 for only two nights – 10 June 2025 and 25 June 2025.

9. *Lithobates clamitans* (Green Frog) Sixteen *L. clamitans* were found across all sites. During the pre-survey all *L. clamitans* observations were auditory. Auditory observations were also recorded at sites 1(1) and 2(5). Green Frogs were also seen hopping into a body of water at sites 1(1), 2(1), and 3(1). *Lithobates clamitans* were also recorded calling via acoustic recorder at site 2 from 7 June 2025 – 10 July 2025.

10. *Lithobates palustris* (Pickerel Frog) *Lithobates palustris* were only observed at site 2. Two individuals were seen in a swampy, vernal pool habitat. One was on a log and the other was caught with a net.

11. *Lithobates sphenocephalus* (Costal Plains Leopard Frog) *Lithobates sphenocephalus* were only observed during the pre-survey in site 1. All 5 individuals were in higher grass and were seen leaping into a large pond.

12. *Notophthalmus v. viridescens* (Red-spotted Newt) Twenty-five *N. v. viridescens* were found during the pre-survey (2), site 1(4), and site 2(19). All individuals were in the eft stage and were found under logs or on the forest floor.

13. *Scaphiopus holbrookii* (Eastern Spadefoot) Two *S. holbrookii* were found at sites 1(1) and 2(1). Both individuals were newly metamorphosed and found in a forest habitat (Fig. 3). Additionally, two separate breeding events were recorded via acoustic

recorder on 5 July 2025 and 14 July 2025 at site 2.

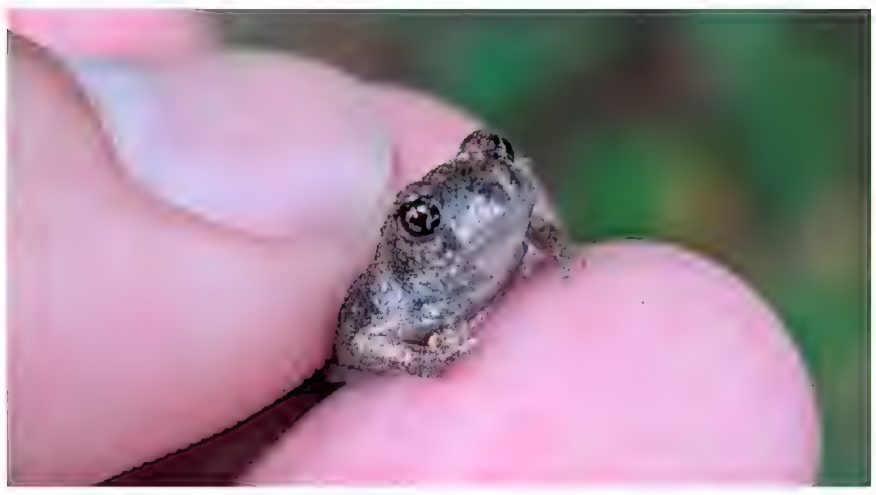

Figure 3. A metamorphosed Eastern Spadefoot found at site 1

Reptiles

14. *Agkistrodon contortrix* (Eastern Copperhead) A single *A. contortrix* was found at site 2 next to a log in a swamp habitat (as seen in the photograph at the beginning of the document). After the survey, when an acoustic recorder was being installed, the *A. contortrix* was seen caudal luring with its tail raised high above its head. It should be noted that many of the frogs found at site 2 where found at this location.

Figure 4. An Eastern Copperhead seen caudal luring at site 2

15. *Carphophis a. amoenus* (Eastern Wormsnake) *Carphophis a. amoenus* was the most abundant reptile found with 11 individuals recorded at sites 1(5), 2(3), and 3(3). All *C. a. amoenus* were found under logs

16. *Chelydra serpentina (North American Snapping Turtle)* The remains of a single *C. serpentina* was found during the pre-survey at site 1. The cause of death was unknown, but the remains appeared to be crushed from a vehicle.

17. *Chrysemys p. picta* (Eastern Painted Turtle) Two C.p.picta were seen before the survey at site 1 when the hoop trap was being set in the large pond at Land's End Wildlife Management Area. During the survey, a single *C. p. picta* was caught in a hoop trap baited with herring and smelt at a different location in the pond.

18. *Coluber c. constrictor* (Northern Black Racer) A single *C. c. constrictor* was found at site 1. The individual was a subadult that was roughly 0.75 meters long and was found in the open along edge habitat.

19. *Nerodia s. sipedon* (Northern Watersnake) Three *N. s. sipedon* were found at sites 1(2) and 2(1). The first individual found at site 1 was a subadult, roughly 0.6 meters in length, and was seen at the edge of a vernal pool under water. The second individual at site 1 was roughly a meter in length and was seen in stilt grass. The head of an individual was seen at site 2 peeking from a rocky pile lining the shore near the boat launch on the Rappahannock River.

20. *Pantherophis alleghaniensis* (Central Ratsnake) There were ten *P. alleghaniensis* found at sites 1(7) and 3(3). All *P. alleghaniensis* were found out in the open in either a woodland habitat or in grass. One individual at site 1 was noted to be 2m long. Another *P. alleghaniensis* was noted to be a dead juvenile with no trauma present. One of the individuals at site 3 was noted to be 1.2 m

21. *Plestiodon fasciatus* (Common Five-lined Skink) Three *P. fasciatus* were found. Two individuals were found basking on a boat ramp during the pre-survey and one *P. fasciatus* was seen climbing up a tree at site 2. The individual at site 2 was noted to be missing its tail. The wound was old and the tail was starting the process of regenerating.

22. *Sceloporus undulatus* (Eastern Fence Lizard) Three *S. undulatus* were found at sites 2(2) and 3(1). All were seen basking either in a woodland habitat (2) or on the shore of the Rappahannock River (1). The individual basking on the shore was noted to be a female due to lack of blue on its ventral side.

23. *Scincella lateralis* (Little Brown Skink) Three *S. lateralis* were found at site 2. Two were seen moving in leaf litter and another was found under a log.

24. *Sternotherus odoratus* (Eastern Musk Turtle) A single *S. odoratus* was caught at site 2 in a shallow part of the Rappahannock River in a minnow trap that was baited with shrimp and smelt (Fig. 5). This was a county record for King George County and a photo was submitted as a voucher (VHS Archives #864).

Figure 5. An Eastern Musk Turtle caught in a minnow trap at site 2 along the Rappahannock River

25. *Terrapene c. carolina* (Woodland Box Turtle) Eight *T. c. carolina* were found during the pre-survey(1) and at sites 1(3), 2(1), and 3(3). The one encountered during the pre-survey was a female found along the grassy edge of a trail. One of the three individuals found at site 1 was noted to be a female, another was a juvenile that was found dead. All *T. c. carolina* found at site 1 were found in edge habitat. The individual found at site 2 was a male found in a woodland habitat. The three *T. c. carolina* found at site 3 were all found in woodland habitat. One was an adult male with the front tip of its carapace missing. Two were deceased individuals with only the shell being observed.

DISCUSSION

As mentioned in the introduction, King George County has up to 10 amphibian and reptile records less than some adjacent counties. Land's End WMA and Toby's Point Unit of the RRNWR were selected to conduct a herpetological survey since it was a possibility to document more records for King George County (VHS database, 2025). The northern part of the county, where Caledon State Park is located, had been previously surveyed by the VHS (Hill and Pierson, 1986; Perry, 2013; and Neff, 2024). Over those surveys from 1983-2024, a total of 510 individuals from 40 species (20 amphibians, 20 reptiles) had been documented. It should be noted that Hill and Pierson (1986) conducted presence/absence surveys and did not count individuals from each species. The only animal that was found in the Perry and Neff surveys that was not found during the Hill and Pierson surveys was *Heterodon platirhinos* (Neff, 2024).

During the surveys at Land's End and Toby's Point there were 167 individuals of 25 species of herpetofauna recorded (13 amphibians and 12 reptiles). A single *S. odoratus* was caught in a shallow part of the Rappahannock River in a minnow trap. This occurrence is a record for King George County. It should be noted that *S. odoratus* has been documented online around King George County, and was seen during the 2022-2023 surveys, but no voucher photo was taken. Adding the Southeastern King George observations into the VHS surveys of Caledon State Park, VHS has recorded 677 individuals of 41 species (20 amphibians, 21 reptiles) in King George County.

King George is surrounded by five counties – Stafford to the west, Spotsylvania and Caroline to the southwest, Essex to the southeast, and Westmoreland to the east. The aforementioned counties of Westmoreland and Caroline have 58 and 61 herpetological records respectively. Spotsylvania and Stafford have the same number of recorded herpetofauna as King George County – 51 species. Essex County only has 29 species of herpetofauna recorded (VHS database, 2025). Many of the species that are found in Westmoreland and Caroline Counties, and not the other four, are common species that are likely to be found in King George, Spotsylvania, Stafford, and Essex Counties (VaFWIS, 2025).

As mentioned in the 2022-2023 Caledon Survey, there are many common species that are still likely to be found in King George County (Neff, 2024). Hill and Pierson (1986) mentioned there are several species that are likely to be found: *Eurycea guttolineata* (Three-lined Salamander), *Gastrophryne carolinensis* (Eastern Narrow-mouthed Toad), *Pseudacris feriarum* (Upland Chorus Frog), *Aspidoscelis sexlineata* (Six-lined Racerunner), *L. rhombomaculata* (Northern Mole Kingsnake), *Farancia e. erytrogramma* (Common Rainbow Snake), *Pantherophis guttatus* (Red Cornsnake), *Lampropeltis triangulum* (Eastern Milksnake), and *Cemophora coccinea copei,* (Northern Scarletsnake); this is also backed up by state data (VaFWIS, 2025).

It should also be mentioned that, although they aren't likely to be found in King George County (VaFWIS, 2025), there are an additional five species that are found in the counties that neighbor King George: *Dryophytes femoralis* (Pine Woods Treefrog) to the south in Caroline County and southeast in Essex County, *Pseudacris brimleyi* (Brimley's Chorus Frog) to the south and the east in Caroline County and Westmoreland County respectively, *Lithobates virgatipes* (Carpenter Frog) to the south in Caroline County, *Siren i. intermedia* (Eastern Lesser Siren) to the south in Caroline County, and *Malaclemys t. terrapin* (Northern Diamond-backed Terrapin) to the east in Westmoreland County (VaFWIS, 2025).

Additionally, there is the potential for *Kinosternon baurii* (Striped Mud Turtle) to be found in King George County (JD Kleopfer, pers comm). In 2021 there was a range extension showing *K. baurii* being more northern ranging than previously thought, ranging as far north as Delaware (Johnston et al, 2021). *Kinosternon baurii* may have been confused with *K. s. subrubrum* due to weaker facial striping on *K. baurii* in the northern parts of their range (Johnston et al, 2021; Grover Brown, pers comm).

As mentioned extensively by Neff (2024), the species listed in the paragraphs above are assumed to be in King George County due to the aforementioned species' habitat preferences, breeding sites, and cover objects found at both Caledon State Park, Land's End

Wildlife Management Area, and Rappahannock River National Wildlife Refuge (Toby's Point Unit).

Also, as mentioned by Neff (2024), additional tools should be used to document additional species beyond normal surveying by the VHS. Tools that were implemented during this survey were crayfish traps, minnow traps, hoop nets, and acoustic recorders. Three crayfish traps were placed in a shallow pond, a shallow slow-moving drainage stream, and a swamp habitat and were baited with smelt and shrimp. They were placed in ideal habitat for *Siren i. intermedia* (Petranka, 1998). Surveys during different times of the year could yield better results when *S. i. intermedia* are more active. In 1991, a researcher found that adult *S. i. intermedia* were substantially more active in the fall and winter (Raymond, 1991). Four minnow traps were placed in a planted, shallow shoreline of the Rappahannock River (2) and a shallow slow-moving drainage stream (2) and baited with smelt and shrimp. They were placed in an ideal habitat for *S. odoratus*, *K. s. subrubrum*, and *K. baurii* (Beane et al, 2010). Three hoop traps were placed in a pond habitat at a depth of approximately 0.5 meters. One was placed in a shaded habitat with buttonbush and lots of leaf litter and two were placed in a sunny spot within large patches of *Nuphar pumila* (Yellow Pond Lily). This is ideal habitat many species of aquatic turtles (Beane et al, 2010).

One acoustic recorder was installed next to a large vernal pool the afternoon before the survey on 6 June 2025. The recorder was installed with hopes of recording calling frog species not encountered during the survey. Six anurans were recorded including one not found during the survey, *D. cinereus*. Unfortunately, the battery on the recorder died on 14 July 2025. In the future, calls will be recorded with less frequency to help conserve battery life. Also, in future surveys, different models of the Wildlife Acoustics Song Meter recorders that have a larger battery capacity will be used.

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Survey of Amphibians and Reptiles at Staunton River State Park and Staunton River Battlefield State Park, Halifax County, Virginia.

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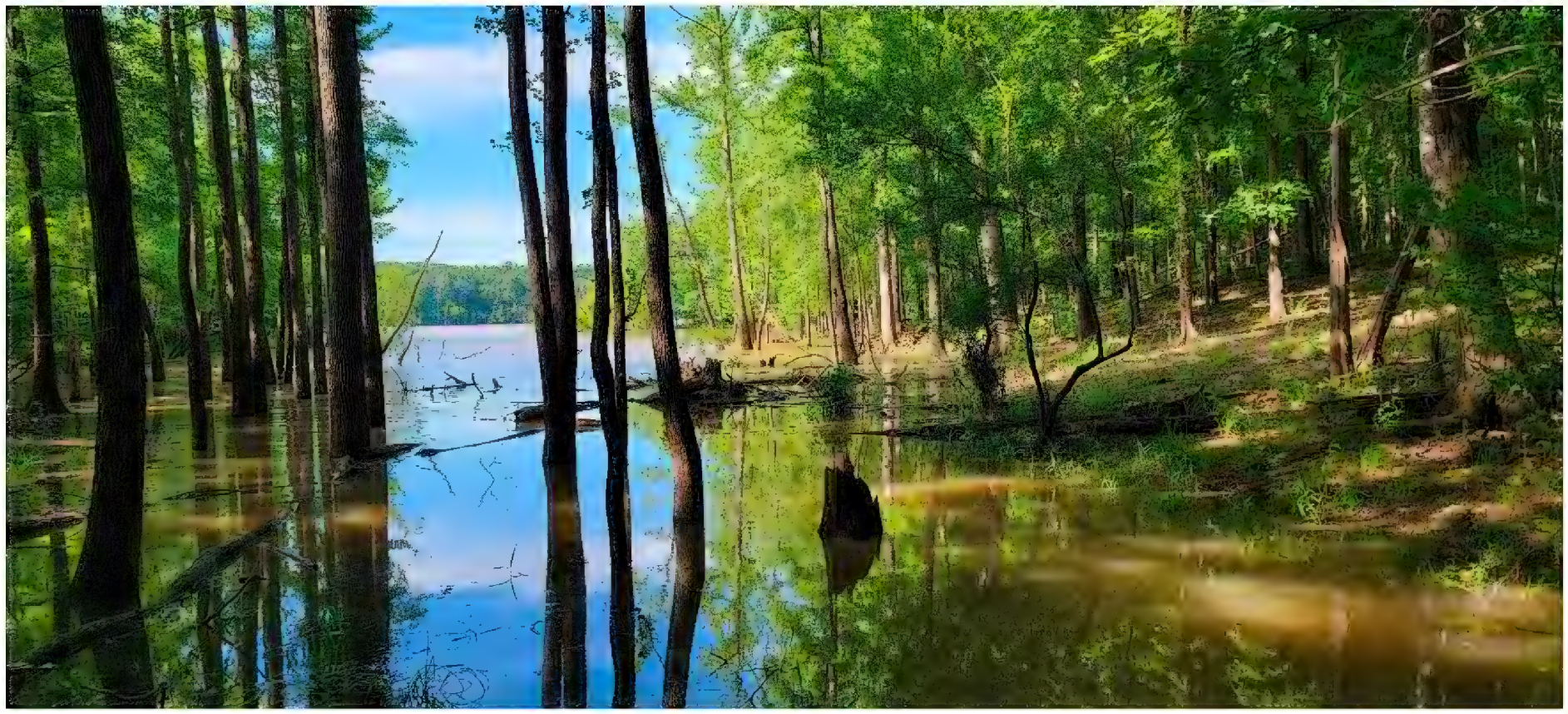

Abstract:

Staunton River State Park (SRSP) and Staunton River Battlefield State Park (SRBSP) in Halifax County, Virginia were surveyed for reptiles and amphibians across multiple seasons. SRSP was visited on six occasions from 31 December 2024 until 5 August 2025 and SRBSP was surveyed once on 18 May 2025. A total of 35 species (12 anurans, 6 salamanders, 4 turtles, 4 lizards, and 9 snakes) were found at SRSP. The one-day survey of SRBSP yielded a total of 13 species (3 anurans, 3 salamanders, 3 turtles, 1 lizard, and 3 snakes). Three species, *Desmognathus lycos, Chelydra serpentina* and *Scincella lateralis* represent new county records (Figures 7, 16 and 18). Two species found during the survey, *Chelydra serpentina* (Tier IVb) and *Terrapene c. carolina* (Tier IIIa) are listed in Virginia's 2015 Wildlife Action Plan as species with special conservation needs. Unidentified chiggers were observed on two species of anurans and one species of salamander (*Anaxyrus fowleri*, *Pseudacris feriarum*, and *Desmognathus lycos*). Several Fowler's Toads exhibited partial axanthism (patches of grey skin).

Keywords: Axanthism, chiggers, herpetofauna, Halifax County, *Desmognathus lycos, Chelydra serpentina and Scincella lateralis.*

INTRODUCTION

A herpetological survey of Staunton River State Park in Halifax County, Virginia took place between 31 December 2024 and 5 August 2025. This park was visited in winter, spring, and summer on six occasions. As part of this survey, a two-day joint venture between the Virginia Herpetological Society and North Carolina Herpetological Society provided 56 volunteers to survey the park on 18–19 May 2025. On 18 May, one survey group spent a half day surveying the western portion of Staunton River Battlefield State Park.

Staunton River State Park (SRSP) spans 945 hectares (2,336 acres) and is bordered by the Staunton River to the north and Dan River to the south. In the early 1800s, the original park area was known as Fork Plantation. After the Civil War, the plantation fell into ruin and was then utilized by tenant farmers (Virginia Department of Conservation & Recreation, 2014). In 1933, the now-recognized Staunton River State Park was designated through the purchase of approximately 484 hectares (1,196 acres) by the Commission of Conservation and Development of Virginia. The park officially opened to the public in 1936 as one of the first six Virginia state parks (Kimble, 2006). In 1952, the John H. Kerr Dam was completed, flooding the southern extent of the park and forming what is now known as Buggs Island Lake. Staunton River State Park consists of a variety of habitats including mature hardwood forest, mixed pine and hardwood forests, and pine-dominated forests. Some of the pine forests undergo fire management, while others are managed through selective thinning (Virginia Department of Forestry, 2025). Management of the pine forest aims to restore a pine savannah habitat with a dense understory of shrubs and grasses. The southern and part of the northern boundary of the park come into contact with the Staunton and Dan Rivers, creating a cove-like habitat with fluctuating water levels. There are several perennial and intermittent streams throughout the park which lead to one of these two rivers. Numerous seasonal temporary wetlands can be found throughout the forests and along the numerous trails throughout the park. Grass fields are maintained around the visitor center, tennis court, and swimming pool area.

The Staunton River Battlefield State Park (SRBSP) spans 121 hectares (300 acres) straddling two sides of the Staunton River near the town of Randolph, VA. The park has a smaller western portion and a larger eastern portion separated by the Staunton River. Staunton River Battlefield State Park was historically included under SRSP. Because of its Civil War landmarks, historic bridge trail and surrounding natural area, the battlefield site was later established as a separate state park. The half day survey of SRBSP took place in the western portion. This portion of the park is characterized by a mature hardwood forest, a large man-made seasonally flooded wetland, several perennial streams, and mowed grass fields.

SRSP and SRBSP are about 30 km east and northeast of South Boston, VA. Both parks are located along the southern edge of the Piedmont in Virginia. The elevation of both parks reaches to about 122 m above sea level. Both parks are part of the Roanoke River Watershed.

Herpetological surveys of Halifax County are generally lacking in comparison to other Virginia counties. The Virginia Herpetological Society conducted a two-day

survey in the county in 2004 (Hayslett et al., 2008) and to our knowledge this study represents the only formal herpetological survey done in the county. For this reason, these parks were prioritized for our survey to help increase available information for the amphibians and reptiles in this area.

The following section provides a general description of five primary survey areas and associated habitats within the two surveyed state parks.

Figure 1. Survey sites at Staunton River State Park (map by M. Boyd)

STUDY SITES

Site 1: Google Earth mid-site GPS coordinates (36.700093°, -78.656721°) (36°42'00.3"N 78°39'24.2"W). Site 1 consisted of mature hardwood forests dominated by hickory, pine and oak (Figure 2) and included sections near the Staunton river edge. Two park maintenance areas were surveyed that contained a mix of artificial cover objects such as tin sheets, wooden boards, and various vertical structures made of cement, metal and wood. This area also included a maintenance road and cutline with unwooded tall grass habitat. Near the river convergence by the canoe boat launch, the riprap revetment was also surveyed along the lake edge (Figure 3). Cover objects were

surveyed along 0.1 km of a rocky, intermittent stream adjacent to the parking lot.

Figure 2. Oak-Hickory Forest (photo by AL Kuhn)

Figure 3. Rocky Revetment (photo by AL Kuhn)

Site 2 and 2a: Google Earth mid-site GPS coordinates (36.696073°, -78.666252°) Site 2 has predominantly mature hardwood forests with intermittent streams draining water to the Dan River. Along the southeastern perimeter of this site there are many cove wetlands. At the intersection of Route 970 and the boat parking lot there is a 0.07 hectare man-made seasonally flooded wetland (Figure 4).

Figure 4. Man-made wetland (photo by JD Gibson)

Site 3: Google Earth mid-site GPS coordinates (36.717047°, -78.691620°) Site 3 consists of a great diversity of habitats including: mature pine savannah, mature mixed hardwood and pine forest, mature hardwood forest, grass fields, and edge habitat around the man-made pond. Within the forests are perennial and intermittent streams and temporary seasonal pools. Some of the streams are accidentally dammed by trail construction and others are naturally dammed, forming shallow pools used by amphibians for breeding. Historical logging skid trails are found throughout this forest and serve as temporary seasonal wetlands. The Edmonds Loop Trail is a 6 km (3.7 mile) hiking trail within this site. Along this trail there are many tire rut pools on the trail and beside the trail which serve as breeding pools for many species of amphibians. A large 7.8 hectare (19 acre) man-made lake (Edmunds Lake) is a major wetland feature of this site.

Site 4 and 4a: Google Earth mid-site GPS coordinates (36.710554°, -78.688272°). Site 4 consists of extensive mature hardwood forests (Figure 5). Throughout the forest there are many forestry skid trails which hold water and serve as temporary seasonal wetlands. Additionally, there are a few intermittent streams draining the forests. A 0.82 hectare (2 acre) man-made pond is a prominent wetland at this site.

Figure 5. Burned Pine Forest (photo by AL Kuhn)

Figure 6. Survey Site at Staunton River Battlefield State Park (map by M. Boyd)

Site 5: Google Earth mid-site GPS coordinates (36.885031°, -78.708541°) This site consists of a 7.17 hectare (18 acre) man-made long cycle seasonally flooded wetland with mature hardwood forest surrounding all sides of the wetland. Several small perennial and intermittent streams are found on this portion of the park. This survey only focused on the part of the park west of the Staunton River in Halifax County.

On 18 and 19 May 2025, the Virginia Herpetological Society and North Carolina Herpetological Society jointly surveyed SRSP and SRBSP in Halifax County, Virginia. The two-day joint survey was conducted by 56 volunteers. Two surveys of SRSP occurred before the joint survey. The first visit occurred on 31 December 2024 and was surveyed by JG and PS for three hours. The second visit occurred on 4 March 2025 by JG, NB, AH, and ED and lasted for four hours. Additionally, the SRSP was visited three times after the joint survey. Post surveys occurred on 10 June 2025 by JG and PS (surveyed site 4 from 0830–1050 and put in 4 crayfish traps for 5 hours in the pond at site 4, site 2 from 1130–1221 and site 3 from 1245–1330); 17 June 2025 by JG and PS (surveyed site 3 from 0730–1115); and 5 August by NB, JG, and PS (surveyed site 2 from 0910–1045 and site 3 (1130–1300). No pre or post surveys were conducted at Staunton River Battlefield State Park. These parks were surveyed using a variety of techniques including: opportunistic visual

encounter, flipping and replacing cover objects along forest floor and in slow moving streams, listening for calling anurans, dipnetting wetlands for anurans and salamanders, trapping for turtles using hoop turtle traps baited with canned sardines (three hoop turtle traps were set in the small pond at site 4 on 18 May and checked on 19 May), inspecting roads for DOR animals, and hand capturing live animals. Table 1 summarizes the amount of survey effort for each state park and site during the 18 and 19 May surveys. All captured animals were inspected for parasites and anomalies. Digital voucher photos were taken of each species and photos of county records have been deposited in the VHS digital archives. Data including numbers of animals, sex, age class, and microhabitat animals were found in were recorded by group leaders on VHS data sheets. All data sheets have been deposited in the VHS archives.

VHS/NCHS Survey

In order to positively identify the species of *Desmognathus* found at Staunton River State Park, it was necessary to obtain and compare a DNA sequence with two newly described species. Pryon and Beamer (2023) split *Desmognathus fuscus* into several new species on the basis of morphological and molecular traits. Tail clips of several *Desmognathus* were stored in 95% ETOH until processing. An approximately 2 mm section of tail tissue was cut into small sections using a scalpel then the tissue was digested using the Qiagen DNeasy Kit following prescribed protocol. The COX gene fragment was amplified using the LCO1490 and HCO2198 primers. The amplified PCR product was processed using the Zymo Research Clean and Concentrator Kit and the product sent to Eurofins for sequencing. The sequence obtained was compared to known DNA sequences in GenBank.

Table 1. Summary of survey effort at four sites in Staunton River State Park and one site in Staunton River Battlefield State Park on 18 and 19 May 2025.

Survey Site	Number of Surveyors	Hours	Estimated Person Hours
1	9*	5	37
2	10	5.5	55
2[a]	17	2.5	42.5
3	11	5.5	60.5
4	10	5.5	55
4[a]	17	1	17
5	12	3	36
Total			303

*Site 2[a] was visited on Monday. Surveyors did not sample the same area surveyed on Saturday, but continued where they left off. Site 4[a] was visited on Monday to view what was collected in turtle traps.

RESULTS

The 31 December 2024 survey observed only one species of anuran, *Pseudacris feriarum*. The 4 March 2025 survey found a total of 5 species (3 anurans, 1 salamander, and 1 turtle). During the two-day survey of SRSP and SRBSP of 18 and 19 May 2025) a total of 34 species (12 anurans, 5 salamanders, 4 turtles, 4 lizards, and 9 snakes) were found at SRSP and a total of 13 species (3 anurans, 3 salamanders, 3 turtles, 1 lizard, and 3 snakes) were found at SRBSP. A total of 387 animals were seen or hand captured. Table 2 gives a summary of each species, total number of animals and totals for each site during the VHS/NCHS survey of these parks on 18 and 19 May 2025. The 10 June survey found a total of 11 species (6 anurans, 2 salamanders, 1 lizard, and 2 snakes). The 17 June survey observed a total of 8 species (5 anurans, 1 salamander, 1 turtle, and 1 lizard). The 5 August survey recorded a total of 12 species (7 anurans, 3 salamanders, 1 turtle, 1 snake). Two species observed had Virginia Wildlife Action Plan Ratings: *Chelydra serpentina* (Tier IVb) and *Terrapene c. carolina* (Tier IIIa). Two species found during the survey, *Scincella lateralis* and *Chelydra serpentina*, were not reported for Halifax County in Tobey (1985), Mitchell and Reay (1999), or the VHS database (VHS database, 2025). These would appear to be county records. However, *Scincella lateralis* was reported from Halifax County on iNaturalist on 11 April 2015 (observation number 127259568 by user jcblalock) and *C. serpentina* was reported from Halifax County on 1 January 2022 (observation number 104124620 by user mountain_lady40). The *Desmognathus* salamanders found during this survey were identified by David Beamer from photographs, and a DNA analysis with GenBank as *Desmognathus lycos*. This represents the first report of the newly described Wolf Dusky Salamander in Halifax County (Figure 7). This species has been reported from Halifax County previously, but it was reported as *Desmognathus fuscus* prior to Pryon and Beamer (2023) describing the new species. An annotated species list follows. Scientific and English common names used in this paper follow Nicholson (2025).

Figure 7. Desmognathus lycos found at site 1 (photo by Ty Smith)

Table 2. Summary of animals observed at each survey site during the 18 and 19 May survey.

Survey Sites	1	2	2[a]	3	4	4[a]	5	Total
Amphibians								
Acris crepitans		1	1	10	3	3	15	33
Anaxyrus a. americanus			*	83				83
Anaxyrus fowleri	10	17	7	4	30		1	68
Dryophytes chrysoscelis				1				1
Dryophytes versicolor		1						1
Gastrophryne carolinensis	1	1						2

Lithobates catesbeianus				1	1T			2
Lithobates clamitans					4	1	1L	6
Lithobates sphenocephalus	2		1	4	1T, 1A			9
Pseudacris crucifer					1			1
Ambystoma maculatum				21L	4L		1	26
Ambystoma opacum		1		2	2L, 1A		2	9
Desmognathus lycos	18			2	2		1	23
Eurycea sp.					1L			1
Plethodon cylindraceus				2	1			3
Reptiles								
Chelydra serpentina				1		1		2
Chrysemys p. picta						7		7
Pseudemys c. concinna	11	1		2			8	22
Terrapene c. carolina	4	1	1	4			1	11
Plestiodon fasciatus	6	1	1	1				9
Plestiodon laticeps					5			5
Sceloporus undulatus		2	2	5	1	1		11
Scincella lateralis	2		2	2	4			10
Agkistrodon contortrix	1							1
Carphophis a. amoenus	4	6	4	1	2		1	18
Coluber c. constrictor	1		1	1	1			4
Diadophis punctatus					1			1
Lampropeltis rhombomaculata		1						1
Nerodia s. sipedon			1					1
Opheodrys a. aestivus			1					1
Pantherophis alleghaniensis	2	1		1			2	6
Storeria dekayi	1		6	1			1	9
Total	63	34	28	149	66	13	34	387

*Site 2[a] was visited on Monday. Surveyors did not sample the same area surveyed on Saturday, but continued where they left off. Site 4[a] was visited on Monday to view what was collected in turtle traps. A = adult, L = larvae, T = tadpole.

Annotated Checklist

Amphibians

1. *Acris crepitans* (Eastern Cricket Frog) On 4 March 2025, numerous cricket frogs were found at site 4. Frogs were observed along the margins of the pond, intermittent streams, and skid trail pools. One adult cricket frog was found at site 2 on day 1 of the survey, and a second adult was found near an inlet of the Dan River at site 2a on the second day. A total of ten cricket frogs were found at site 3. Five males were observed calling along the margin of the man-made pond. Numerous cricket frogs were reported being found around a pond at site 4. Ten adult Eastern Cricket Frogs were found in a forest at the edge of a man-made pond at site 5. Cricket frogs were observed calling from ponds at sites 3 and 4 on 10 June. On 17 June cricket

frogs were observed calling from the margin of wetlands behind the dam at site 3. On 5 August metamorph cricket frogs were found emerging from a cove inlet of the Dan River at site 2 and along the margin of the large pond at site 3. Numerous tadpoles with hindlegs were dipnetted at a seasonally flooded man-made wetland pond at site 2.

2. *Anaxyrus americanus americanus* (Eastern American Toad) A mass emergence event of metamorphs was observed on 19 May near the banks of a northern inlet of the Dan River in site 2a. No adults were observed. Eighty-three Eastern American Toad metamorphs were found on the forest floor at site 3. One adult Eastern American Toad was found in leaf litter beside the main trail at site 3 on 10 June.

3. *Anaxyrus fowleri* (Fowler's Toad) A total of 10 adults and subadults were found at site 1, primarily observed in the open on the forest floor. Seventeen adult Fowler's Toads were found at site 2 and 17 additional adults and subadults were found during the survey at site 2a. Toads were found in leaf litter, under log bark, and one was found on top of a log. Four subadult Fowler's Toads were found in leaf litter at site 3. One of these toads was parasitized by two unidentified chigger larvae (Figure 8). Several toads had grey patches of dorsal skin appearing to be an anomaly called partial axanthism (Jablonski et al., 2014) (Figure 9). A total of 30 adult and subadult Fowler's toads were observed at site 4. One adult was found under a landscaping rock by the visitor's center at site 5. On 5 August juvenile Fowler's Toads were found in leaf litter at sites 2 and 3. Metamorph toads were also found emerging from the large pond at site 3. Fowler's Toads at SRSP have a wide variation in color pattern, ranging from light tan, red, to grey (Figure 9).

Figure 8. Fowler's Toad with two chigger mites (photo by DG Cooper)

Figure 9. Variation in Fowler's Toad coloration (photos by JD Gibson)

4. *Dryophytes chrysoscelis* (Cope's Gray Treefrog) One male Cope's Gray Treefrog was heard calling at site 3 on 18 May. One male was observed calling from an arboreal perch near a stream at site 2 on 10 June. In water filled road ruts on and beside the Beaver Swamp Trail more than 40 clusters of Gray Treefrog eggs were observed on 10 June (these could have been *D. chrysoscelis* or *D. versicolor* eggs). Fresh eggs were observed deposited in road ruts, dammed streams, and trailside temporary pools at site 3 on 17 June. On 5 August numerous *Dryophytes chrysoscelis/versicolor* tadpoles were found in the man-made wetland at the intersection of route 970 and the boat parking lot in site 2 (Figure 4).

5. *Dryophytes versicolor* (Gray Treefrog) One Gray Treefrog male was heard calling at site 2 on 18 May. One Gray Treefrog was heard calling at the pool parking lot at the end of the survey on Sunday 19 May. Several male frogs were heard calling from the woods beside the Edmunds Loop Trail at site 2 on 10 June.

6. *Gastrophryne carolinensis* (Eastern Narrow-mouthed Toad) One adult female was found under a 2x6 wooden beam at site 1 in the park maintenance yard. This individual had aberrant coloration with primarily rust colored markings on a dark background (Figure 10). One adult narrow-mouthed toad was found under bark at site 2. On the Saturday night of the first day (May 18th) of the group survey, one VHS member camping, heard a narrow-mouthed toad calling in the field near the visitor center. Numerous Eastern Narrow-mouthed Toad tadpoles were dipnetted in the man-made wetland at the intersection of Route 970 and the boat parking lot in site 2 on 5 August.

Figure 10. Aberrant-colored Gastrophryne (photo by Ty Smith)

7. *Lithobates catesbeianus* (North American Bullfrog) One bullfrog was found at site 3. One bullfrog tadpole was dipnetted and identified from a pond at site 4. A juvenile bullfrog was dipnetted in a ditch near the bathhouse at site 3 on 5 August.

8. *Lithobates clamitans* (North American Green Frog) Four green frogs were found around the margin of a pond at site 4. Numerous tadpoles were dipnetted from the pond at site 4. One male green frog was heard calling from a man-made pond at site 5. Males were heard calling from ponds at sites 3 and 4 on 10 June. On 17 June, fresh Green frog egg masses were observed in a pool within a man-made water retention pond and a flooded tire rut on a road at site 3 (Figure 11). Males were heard calling from the margin of a small wetland behind the dam at site 3 and from the margin of a temporal seasonal pool by Edmunds Loop Trail. One male was heard calling along the margin of the pond at site 4 on 5 August.

Figure 11. *Lithobates clamitans eggs (photo by JD Gibson)*

9. *Lithobates palustris* (Pickerel Frog) Two Pickerel Frogs were heard calling at 1201 h along the margin of the man-made pond at site 4 during the 4 March 2025 presurvey of SRSP. A metamorph Pickerel Frog was found in vegetation beside the Beaver Swamp Trail at site 4 on 10 June.

10. *Lithobates sphenocephalus utricularius* (Coastal Plains Leopard Frog) One adult was observed active at site 1 along the revetment (Figure 3) beside the canoe launch. A second adult individual was observed in the intermittent creek habitat near the parking lot of site 1. Four leopard frogs were found at site 3. One adult leopard frog and one tadpole were found at site 4. On 17 June five adult leopard frogs were observed along the margins of pools created within dammed streams at site 3. Adult leopard frogs were observed at sites 2 and 3 on 5 August. One adult was observed by a cove inlet of the Dan River at site 2 (Figure 12) and another adult was observed along the margin of the large pond at site 3.

Figure 12. *Lithobates sphenocephalus* (photo by AL Kuhn)

11. *Pseudacris crucifer* (Spring Peeper) Numerous Spring Peeper tadpoles were found in a pool near a stream at site 4. At this same site a juvenile Spring Peeper was found at the margin of a pond.

12. *Pseudacris feriarum* (Upland Chorus Frog) During a pre-survey of the park on 31 December 2024, Upland Chorus Frogs were heard calling from two locations at site 2. Frogs were heard calling from the small man-made wetlands at the intersection of 940 and the boat trailer parking lot and from a small intermittent stream. On 4 March 2025, male Upland Chorus Frogs were observed calling from site 2 (3), site 3 (2), and many from site 4. Males were calling from inside and along the margins of skid trail pools, a man-made drainage ditch, and intermittent streams. Three Upland Chorus Frog egg masses were found shallowly submerged and attached to vegetation in a skid trail puddle adjacent to the Equestrian Campground at site 3. One female hand captured in a tire rut pool had a chigger larva embedded on the surface of one of its toes on its hind right foot (Figure 13). This is the first time a chigger has been reported parasitizing this species (Watermolen, 2021).

Figure 13. *Pseudacris feriarum* with chigger mite (photo by JD Gibson)

13. *Ambystoma maculatum* (Spotted Salamander) On 4 March 2025, 29 shallowly deposited Spotted Salamander egg masses were found at site 2 in the man-made seasonally flooded wetland found at the intersection of Route 970 and the boat parking lot. During that same presurvey, sixty-nine egg masses were also observed in skid trails at sites 3 and 4 and five egg masses were found in pools created in intermittent streams at site 4. Some of the stranded egg masses left out of water still had viable embryos, showing the protective nature of the jelly surrounding each embryo. On 18 May, one large adult Spotted Salamander was found under a log adjacent to seasonally flooded wetlands at site 5. Twenty-one Spotted Salamander larvae were dipnetted from a breeding pool as site 3. Four Spotted Salamander larvae and one egg mass were found in an intermittent stream at site 4. On 17 June two Spotted Salamander larvae (55 and 51 mm total length) were dipnetted from a tire rut pool in the middle of Edmonds Loop Trail at site 3.

14. *Ambystoma opacum* (Marbled Salamander) Two adult Marbled Salamanders were found under logs at site 5. One female Marbled Salamander was found under a log at site 2. Two female Marbled Salamanders were found under logs at site 3. One adult female Marbled Salamander was found under a log at site 4. Two Marbled Salamander larvae were collected from a pond at site 4.

15. *Desmognathus lycos* (Wolf Dusky Salamander) Pryon and Beamer (2023) recently split *Desmognathus fuscus* into several new species. The *Desmognathus* at Staunton River State Park match the physical description and COX genetic sequence of *Desmognathus lycos* (Figures 7 and 14). Eight adult and ten juvenile *Desmognathus* were observed either under rocks (14) or active on rocks and logs (2) in an intermittent stream ~0.1 kilometers from a cement culvert at site 1 ~0.2 km from the visitor center adjacent to the River Bend Trail. Two dusky salamanders were found at site 3. Two adult dusky salamanders were found under cover objects at site 4. One adult dusky salamander was found under a rock in a small intermittent stream at site 5. Eleven dusky salamanders were found in streams at sites 2 and 4 on 10 June. One adult found at site 4 had an embedded chigger in its right hind foot (Figure 15). Eight adult and one juvenile dusky salamander were found under rocks along a stream at site 2 on 5 August.

Figure 14. Venter of *Desmognathus sp.* (photo by P Sattler)

Figure 15. Chigger mite on *Desmognathus lycos (photo by* DG Cooper)

16. *Eurycea cirrigera* (Southern Two-lined Salamander) One *Eurycea cirrigera* larva was found in a stream at site 4. An adult Two-lined Salamander was found under a rock by a stream at site 2 on 10 June. One adult Two-lined Salamander was found under a rock by a stream at site 2 on 5 August.

17. *Notophthalmus viridescens viridescens* (Red-spotted Newt) One larva was dipnetted along the margin of the large pond at site 3 on 5 August.

18. *Plethodon cylindraceus* (White-spotted Slimy Salamander) Two female White-spotted Slimy Salamanders were found under logs at site 3. Two female slimy salamanders were found under logs at site 4.

Reptiles

19. *Chelydra serpentina* (North American Snapping Turtle) One fragmented and dried Snapping Turtle shell was found adjacent to a skid trail pool at site 3 on 4 March 2025. One adult (Figure 16, VHS Archive #884) was captured in a large, baited hoop net trap set overnight (May 18-19) in the pond adjacent to the equestrian campground within site 4a. One leech was observed on the neck of this individual.

Figure 16. *Chelydra serpentina* from site 4a (photo by P Sattler)

20. *Chrysemys picta picta* (Eastern Painted Turtle) Two adult Eastern Painted Turtles were observed basking on a log in a man-made pond at site 5. Seven adult *C. p. picta* were captured in large hoop nets placed in a pond overnight (May 18-19) in site 4a and baited with sardines. Of these adults, four were male and three were females. One individual was observed with an engorged leech on the posterior of the plastron that was approximately 12 mm in length. One painted turtle was observed basking on a log in the pond at site 3 on 10 June.

21. *Pseudemys concinna concinna* (Eastern River Cooter) Four adult Eastern River Cooters were observed basking on logs and three were observed swimming in a man-made pond at site 5. One dried shell was found in the forest at the margin of the man-made pond at site 5. One adult turtle was observed at site 2. One adult River Cooter was observed basking on a log at site 3. One dead turtle was also found at this site. A total of 11 Eastern River Cooters were spotted on semi-submerged logs along the banks of the Dan River at site 1.

22. *Terrapene c. carolina* (Woodland Box Turtle) One adult female Woodland Box Turtle was found on the forest floor at site 5. Two adult females were found with caudal ends exposed and heads burrowed in leaf litter within site 1. One showed signs of damage to its anterior posterior carapace (Figure 17). The remains (carapace and pelvic girdle bone fragments) of two additional *T. c. carolina* were found within site 1. One juvenile DOR box turtle was found on the road near site 2. A dry shell was also observed at this site. One male and three female box turtles were observed at site 3. One adult box turtle was found in leaf litter at site 2a. On 17 June a two-year-old Box Turtle was found beside the Edmonds Loop Trail concealed in moss. An adult Box Turtle was found in a form in the forest at site 2 on 5 August.

Figure 17. *Terrapene carolina* with shell damage (photo by AL Kuhn)

23. *Plestiodon fasciatus* (Common Five-lined Skink). One Common Five-lined Skink was found at site 3. A total of six adults and subadults, both female and male, were observed at site 1. Most site 1 individuals were observed actively basking on artificial structures near maintenance sites; two were observed under cover objects.

24. *Plestiodon laticeps* (Broad-headed Skink) Five adult Broad-headed Skinks were observed on trees at site 4.

25. *Sceloporus undulatus* (Eastern Fence Lizard) Site 2 yielded 7 observations of Eastern Fence Lizards. At this site a mixture of male and female and adult and juvenile lizards were observed. Lizards were found on logs and climbing trees. Five Fence Lizards were found on trees at site 3. One adult Fence Lizard was observed at site 4. Two individuals were observed active on fallen tree trunks at Site 2a. Adult Fence Lizards were observed at sites 3 and 4 on 10 June. An adult Fence Lizard was observed by the Edmonds Loop Trail in leaf litter at site 3 on 17 June.

26. *Scincella lateralis* (Little Brown Skink) Four Little Brown Skinks were reported from sites 1 and 2a; two for each site. Two Little Brown Skinks were found at site 3; one was found in Pine leaf litter and the other was found under a log. Four adult Little Brown Skinks were found under logs at site 4 (see figure 18).

Figure 18. *Scincella lateralis* (photo by DG Cooper)(VHS Archive #885)

27. *Agkistrodon contortrix* (Eastern Copperhead) One adult Eastern Copperhead was observed basking on rocky revetment near the canoe boat launch at site 1 (Figure 19).

Figure 19. Copperhead (photo by AL Kuhn).

28. *Carphophis a. amoenus* (Eastern Wormsnake) Four Wormsnakes were found under natural and artificial cover objects at site 1. Six adult Wormsnakes were found under logs at site 2 (Figure 20). Four adult Wormsnakes were found under logs at site 2a. One Wormsnake was found under a rock at site 3. Two adult Wormsnakes were found under logs at site 4. One adult Wormsnake was found under a rock surrounding a flower bed at the visitors center at site 5 on 18 May.

One adult Wormsnake was found under a log beside Edmunds Loop Trail on 10 June. One adult was found under a log in the forest at site 2 on 5 August.

Figure 20. *Carphophis amoenus from site 2 (photo by JC Beane)*

29. *Coluber c. constrictor* (Northern Black Racer) Two Northern Black Racers were observed at site 3. A shed skin was also found at this site. One large (~1.8 m) individual was observed active on the forest floor in the afternoon on the Tutelo Trail within site 1. Healed damage to the posterior dorsum was noted. One Black Racer was found in an upland area at site 4. One adult individual was observed in a wetland adjacent to the parking lot in site 2a. One adult Black Racer was observed basking on rocks beside the Beaver Swamp Trail on 10 June.

30. *Diadophis punctatus* (Ring-necked Snake) One adult Ring-necked Snake was found in an upland area at site 4. Halifax County falls within the intergrade zone of *D. p. punctatus* and *D. punctatus edwardsi* (Fontanella et al. 2018). A few characters have been used to distinguish these two subspecies, including ventral patterning, the most commonly referenced character is the presence of an unbroken collar with *D. punctatus edwardsi* (the Northern Ring-necked Snake) and a partial collar with *D. p. punctatus* (Southern Ring-necked Snake), see Figure 21. Fontanella et al. (2018) found that this trait is not always diagnostically compatible with genetic boundaries within this zone.

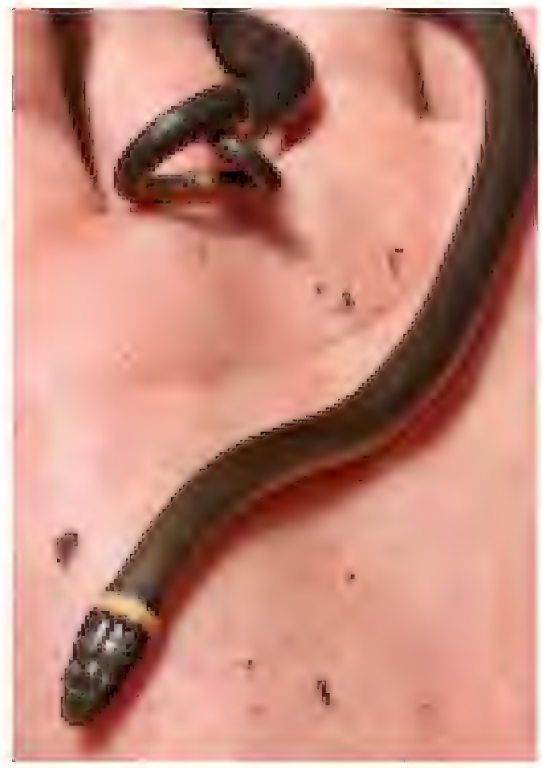

Figure 21. *Diadophis punctatus.(photo by AL Kuhn)*

31. *Lampropeltis rhombomaculata* (Northern Mole Kingsnake) One Northern Mole Kingsnake observed basking by a picnic table at site 2.

32. *Nerodia s. sipedon* (Northern Watersnake) One juvenile was found underneath the bark on a decaying log partially submerged in the mud on the inlet bank of the Dan River at site 2a. This same log also yielded three *S. dekayi*.

33. *Opheodrys aestivus aestivus* (Northern Rough Greensnake) One deceased adult female (gravid) was found on the forest floor near the northern inlet of the Dan River at site 2a. The individual had external damage suggestive of predation by bird or small mammal.

34. *Pantherophis alleghaniensis* (Central Ratsnake) Two adult *P. alleghaniensis* were found at 1. One (1.5 m long) found beneath a discarded cement culvert. The second (~1.5 m ft) was found basking on a dead log at mid-

day. Site 2 yielded 1 adult (1m) Ratsnake. One male Central Ratsnake was observed basking on a trail at site 3. Two Central Ratsnakes, one approximately 1.8 m long and one approximately 1.2 m long, were found on the forest floor at site 5.

35. *Storeria dekayi* (Dekay's Brownsnake) A single gravid female was found under a log at site 3. One adult Dekay's Brownsnake was found under a rock in a flowerbed at the SRBSP visitor center at site 5. Three individuals were found underneath the bark on a decaying log partially submerged in the mud on the inlet bank of the Dan River at site 2a along with the only *N. sipedon* observation. One adult individual was observed near the maintenance area of site 1 under a cover object.

DISCUSSION

The intent of the survey was to increase our knowledge of the amphibians and reptiles living in this part of Virginia. The Virginia Herpetological Society has done little work in Halifax County, having only completed one survey in this county, in 2004 (Hayslett et al., 2008; Gibson, 2023). During the two-day survey of "The Cove" along the Staunton River, Hayslett et al. (2008) reported 28 species (11 anurans, 4 salamanders, 3 turtles, 3 lizards, and 7 snakes). The Hayslett et al. (2008) species list includes mostly common species which have a large or even statewide distribution with one exception, *Tantilla coronata*. The 2025 survey helped to document 35 species (12 anurans, 6 salamanders, 4 turtles, 4 lizards, and 9 snakes) at SRSP and 13 species (3 anurans, 3 salamanders, 3 turtles, 1 lizard, and 3 snakes) at SRBSP. The lower numbers obtained at "The Cove" survey may reflect less survey effort. Also, weather during the 2004 survey (Hayslett et al. 2008) was hot and dry, which may reflect lower observation numbers (J. Gibson, P. Sattler, pers. comm.). Our 2025 survey recovered all the species found in 2004 (Hayslett et al., 2008) with the exception of *Tantilla coronata*.

Between these two surveys, the updated species list for SRSP and SRBSP are far from complete. Please note that the surveys, while thorough, were also short in duration. While not included in this survey report, public databases such as iNaturalist provide additional records that will be evaluated in these future efforts. The pre-survey and survey events did not capture all seasons and weather conditions. To further develop a complete checklist for both state parks, future work will need to involve seasonal surveys of this park with targeted sampling techniques. Given the single day spent at SRBSP in comparison to efforts at SRSP, the following comments will address findings at SRSP.

Two anurans that are not currently included in the SRSP checklist are *Dryophytes cinereus* and *Scaphiopus holbrookii*. Both species have been reported for Halifax County. *Eurycea guttolineata*, *Plethodon cinereus*, and *Pseudotriton ruber ruber* are salamanders which have been reported in Halifax county and may be found within the park boundaries with greater survey effort. *Ambystoma talpoideum*, *Hemidactylium scutatum*, and *Pseudotriton montanus montanus* are salamanders found in surrounding counties and should be searched for using appropriate methods during known activity periods and in proper breeding habitat. The only lizard that is currently not on the SRSP checklist but may occur in the region is *Aspidoscelis sexlineata sexlineata*. This species has been observed in Halifax

County and suitable habitat for this species can be found within the park. Despite trapping for turtles in a single pond, *Kinosternon subrubrum subrubrum* and *Sternotherus odoratus* were not observed. Both turtle species are known from Halifax County, and may be found within SRSP with additional trapping efforts. Six species of snakes known for Halifax County including *Heterodon platirhinos*, *Lampropeltis getula*, *Pantherophis guttatus*, *Tantilla coronata*, *Thamnophis sirtalis sirtalis*, *Virginia valeriae valeriae* may be found within the park, but will require extensive efforts. Many of these unreported but likely to occur species may have low abundance in this area and secretive life histories, making them difficult to find with reduced survey efforts or suboptimal weather conditions. *Storeria occipitomaculata* is documented in all surrounding counties, but still remains undocumented in Halifax County.

SRSP historical and recent geographical features may in part have influenced the assemblage of species found during this survey. Before the John H. Kerr Reservoir was developed in the early 1950s, SRSP was bordered both by the Dan and Staunton Rivers. Prior to damming, the Dan and Staunton Rivers would have converged further east near Clarksville, Virginia and contributed to extensive floodplains surrounding both river basins. At the edge of the current park boundaries, swampy wetlands that are no longer present would have provided extensive habitat for breeding amphibians. The park was formally established before the creation of the John H. Kerr Reservoir, thus the margins of the park we see today were flooded by the lake formation. These changes could have significantly impacted historical distributions of amphibians and reptiles and current population sizes through alterations to suitable habitat or barriers to ongoing gene flow (Chandler, 2023). After the damming of the Roanoke River to create this reservoir, a "lake effect" created a new type of habitat, the cove wetland. This wetland type is found along the perimeter of the entire park. The lake that formed after the construction of the John H. Kerr dam is known to fluctuate in depth, and these cove wetlands are therefore temporary. The mass emergence of metamorphic Eastern American Toads found in the May survey and the many snakes found along its margin suggest the value of this wetland to native species. The damming of the Roanoke River has also created a peninsula effect which has or may have an impact on gene flow and connectivity for the populations inhabiting this area (Chandler, 2023; Greene, 2024).

Although some habitats in the park were highly disturbed due to anthropogenic land use prior to acquisition, some of these areas were still able to provide important habitat structure for reptiles and amphibians. For example, the skid trails from historical logging now provide some temporary breeding habitats for *Pseudacris crucifer*, *Pseudacris feriarum*, and *Ambystoma maculatum*. Numerous egg masses from *P. feriarum* and *A. maculatum* were found in these shallow pools in early March. Additionally, maintenance areas and cutlines in site 1 that were surrounded by forest habitats were highly disturbed, but also yielded a high number of herpetological observations, which may be due partly to the increased observation visibility and access for survey participants. This pattern was consistent for several artificial wetland habitats, such as the pond in site 4a, and erosion control structures in sites 1 and 2a. It must be noted that during the June 17th visit of Edmonds Loop Trail almost all the road ruts on the trail or beside the trail were used by *Dryophytes chrysoscelis/versicolor* and a few by *Lithobates clamitans* as breeding

pools. Many egg masses and tadpoles were observed in these pools. We also observed freshly laid gray treefrog eggs in a deep flooded horse footprint in the middle of the trail. In several deeper tire ruts we found *Ambystoma maculatum* larvae. In some areas of the trail permeable interlocking concrete pavers were placed in the middle of the path. We assume this was to drain the trail, as adjacent to these pavers were small and shallow temporary wetland pools.

To support breeding amphibian activity in the park, we recommend leaving wetland areas as untouched as possible, as visitor and staff safety priorities allow, including road ruts, that serve as breeding pools for both frogs and salamanders. Regarding disturbed habitats, future work should evaluate the recruitment value and metapopulation connectivity of anthropogenic breeding habitats to determine the value of these in supporting species diversity. As an example, the man-made seasonally flooded wetland pond at the intersection of route 970 and the boat parking lot (Figure 4) was surveyed from March until August and found to be a breeding wetland for *Acris crepitans*, *Ambystoma maculatum*, *Dryophytes chrysoscelis/versicolor*, *Gastrophryne carolinensis*, *Pseudacris crucifer*, and *Pseudacris feriarum*. Note the value of this wetland type to these species, as we found no fish or anurans such as the large Lithobatid frogs.

Parts of SRSP include naturally fire-dependent vegetative communities. In support of general habitat restoration (Virginia Department of Forestry Report, 2025), evidence of recent prescribed burn events and subsequent succession were evident in the forest area of site 4a (Figure 5). Long term monitoring of Oak Hickory forest habitat in the southern piedmont region is important for documenting the short and long-term impact of this management on native herpetofauna, including predation rates, occupancy and movement (Keyser et al., 2004).

One nest of the invasive red imported fire ant (*Solenopsis invicta*) was observed near the parking lot area adjacent to the forest at site 1 during the 18 May survey and four colonies were observed at two separate locations along the Edmund Loop Trail at site 3 during a survey on 17 June. This species is spreading rapidly west across Virginia through an initial northward expansion. Although sightings in Halifax County have already been reported (Malone *et al.,* 2023), increased frequency of sightings in eastern counties and predicted spread of this species (Morrison *et al.,* 2005, Malone *et al.,* 2023) poses new risks to herpetofauna already threatened by habitat loss and climate change (Allen *et al.,* 2017). SRSP is actively establishing a fire-controlled pine plantation on various parts of the park. This management practice creates an open canopy and disturbed habitat which is preferred by fire ants (Darracq et al., 2022). Fire ants are detrimental to many species of amphibians and reptiles and eradication of fire ants should be part of the park's management plan (Darracq, op. cit.). Halifax County is currently within the important fire ant quarantine in Virginia.

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Group photo, Saturday, 18 May 2025

Group Photo Sunday, 19 May 2025

Seventeenth Annual HerpBlitz: Survey of Kirkham's Farm, Prince George County, Virginia

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Abstract: Kirkham's Farm in Prince George County, Virginia was surveyed for amphibians and reptiles on 2-4 June 2023 and on 15 March 2024. Additionally, three SM4 Sound Recorders were deployed in three locations and collected calls from 1 March until 12 June 2024. A total of 38 species (19 anurans, 4 salamanders, 4 turtles, 5 lizards, and 6 snakes) were found during the survey period. One county record confirmation of *Lithobates kauffeldi*, was found on the edge of a Water Tupelo (*Nyssa aquatica*) swamp. Six species, *Chelydra serpentina* (Tier IVb), *Clemmys guttata* (Tier IIIa), *Heterodon platirhinos* (Tier IVc), *Dryophytes gratiosus* (Tier IIa), *Scaphiopus holbrookii* (Tier IVc), and *Terrapene c. carolina* (Tier IIIa) are listed in Virginia's 2015 Wildlife Action Plan as species with special conservation needs.

Keywords: Herpetological Survey, *Lithobates kauffeldi,* tick parasitism, Blackwater River, *Chelydra serpentina*, *Clemmys guttata*, *Heterodon platirhinos*, *Dryophytes gratiosus*, *Scaphiopus holbrookii*, and *Terrapene c. carolina.*

INTRODUCTION

Kirkham's Farm is a large privately owned and managed property located in the coastal plain physiographic province of Prince George County. It is bisected by State Route 629 and is bounded to the east by Blackwater Swamp and to the west by Second Swamp. Blackwater Swamp and Second Swamp are both part of the Blackwater River Watershed. The property sits northwest of the town of Disputanta. This farm is actively managed for timber and wildlife. It consists of stands of hardwood, mixed pine/hardwood, and

planted pine forests. Throughout the woodlands are seasonal temporary pools and small intermittent streams. Agricultural fields, open fields, a small lake and a small pond are other features of this property. The swamps found to the east and west have dark colored water with a forest of Water Tupelo (*Nyssa aquatica*) found throughout. Adam Priestley, habitat biologist for the land owner, reached out to the VHS to conduct a herpetological survey. This survey occurred on June 2 - 4, 2023 with a follow up survey on 15 March 2024. What attracted the VHS to the property was the potential for range extensions for many species of amphibian and reptiles and with the hopes of viewing aquatic salamanders.

This property is in the process of being approved for a conservation easement, so this survey will provide a preliminary species list to aid in this process. Future management plans for the property include adding the use of fire to the landscape, adding seven acres of permanent wetland, waterfowl impoundments, and catchment basins to capture agricultural runoff and nutrients before they reach the Blackwater River drainage. Reintroduction of Longleaf Pine (*Pinus palustris*) stands on some of the upland sections of the property is also part of the plan to introduce more diversity of species and habitat.

Study Sites

The following are descriptions of the major sites visited during the surveys. The coordinates were obtained using Google Earth. Following each site description is a standard technical wetlands habitat classification is given in parentheses following Cowardin et al. (1970). See figure 1 for a map of the area.

Site 1: Old Pond (37.151434°, -77.235168°). A small (0.25 hectare) pond in an open field, merging with a swamp at the back of the pond. (PEM2Hh - Palustrine, emergent vegetation, nonpersistent, permanently flooded, diked/impounded). A few shrubs were scattered along the shore. Cat Tails and floating vegetation lined the shores. The name Old Pond comes from the length of time this pond has been in existence (since 2009), compared to site 3 the Big Pond, which was more recently constructed. One hoop trap and two crayfish traps were baited with sardines and set in the pond on 2 June and pulled on 3 June. This site was searched the afternoon of 2 June while putting out traps, the night of 2 June after dark, and the morning of 3 June after pulling the traps. Behind each water habitat a standard technical wetlands habitat classification is given in parentheses following Cowardin et al. (1970).

Site 2: Blackwater Swamp (37.156574°, -77.228747°). A Water Tupelo (*Nyssa aquatica*) Swamp. (PFO1H - Palustrine, forested, broad-leaved deciduous, permanently flooded). Dominant vegetation surrounding the Swamp included White Oak (Quercus alba), American Beech (*Fagus grandifolia*), Red Maple (*Acer rubrum*), Pignut Hickory (*Carya glabra*) and Black Oak (*Quercus velutina*). The understory was sparse but included American Holly (*Ilex opaca*) and Greenbriar (*Smilax sp.*). At the swamp itself the understory included Lizard's Tail (*Saururus cernuus*) and Arrow Arum (*Peltandra virginica*). One hoop trap, 10 crayfish traps, and 3 minnow traps were baited with sardines and placed in the swamp on 2 June and pulled on 3 June. This site was searched briefly on 2 June while putting out traps, and the afternoon of 3 June after pulling the traps.

Site 3: Big Pond (37.157721°, -77.238397°). A 2.5 hectare-sized pond surrounded mostly by agricultural fields. (PUB3Hh - Palustrine, unconsolidated bottom, mud, permanently flooded, dike/impounded). One side was bordered by a Loblolly Pine (*Pinus taeda*) forest. This pond is aerated artificially. Two hoop traps and one crayfish trap were baited with sardines and set out on 2 June and pulled on 3 June. This site was searched the afternoon of 2 June while putting traps into the pond, after dark on 2 June during a night survey, and the afternoon of 3 June while pulling traps.

Site 4: Dick's Branch (37.160355°, -77.229666°). A continuation of Blackwater Swamp, a Water Tupelo Swamp with Oak (*Quercus sp.*), American Beech (*Fagus grandifolia*), Red Maple (*Acer rubrum*) and Hickory (*Carya sp.*) leading to Water Tupelo (*Nyssa aquatica*) in the Swamp itself. (PFO1H - Palustrine, forested, broad-leaved deciduous, permanently flooded). The understory was mostly Lizard Tail (*Saururus cernuus*) and Arrow Arum (*Peltandra virginica*) in the Swamp itself. Four crayfish and 3 minnow traps were baited with sardines and placed on 2 June and pulled on 3 June. This site was searched the afternoon of 2 June while putting traps into the swamp and the afternoon of 3 June while pulling the traps.

Site 5: Ephemeral Pool (37.153962°, -77.236756°). A small ephemeral pool approximately ten meters in diameter, containing several inches of water at the time of the survey. (PEM2C - Palustrine, emergent vegetation, nonpersistent, seasonally flooded). It was located between an agricultural field and a deciduous forest. This site was searched briefly the afternoon of 2 June.

Site 6: Barns and surrounding woodlands (37.148104°, -77.244145°). Three large buildings containing a variety of farm equipment, various building materials on the ground, and the surrounding deciduous forest. A small stream, intermittent at the time of the survey (R4SB3 - Riverine, intermittent, streambed, cobble-gravel), and several small pools (PFO1C - Palustrine, forested, broad-leaved deciduous, seasonally flooded), each less than ten meters in diameter were within the forest. This site was searched the morning of 3 June.

Site 7: Construction storage site (37.150500°, -77.240432°). An outdoor site where construction materials were stored. These materials consisted of stacks of tin roofing, plywood, palates, piles of stone and topsoil, and other types of metal building materials. This site was searched the mornings of 3 and 4 June.

Site 8: Seasonally flooded shallow pool approximately 2 meters in diameter (37.149313°, -77.242057°). This site was visited on 15 March 2024. (PEM2C - Palustrine, emergent vegetation, nonpersistent, seasonally flooded).

MATERIALS AND METHODS

On Friday June 2, four participants set out 17 crayfish traps, 7 minnow traps, and 4 baited hoop turtle traps at sites 1-4. That night 3 volunteers conducted a night survey of the property. During the night survey we employed dip netting, listening for calling anurans, visual encounters with flashlights, and road cruising. On Saturday June 3 eight volunteers formed one large group. This group visited sites 1-4 and 7, and utilized the following techniques: hand capture, dip netting, visual encounter, flipping and replacing cover objects such as logs, rocks, and trash, and listening for calling anurans. Animals that were hand captured were inspected for anomalies and parasites and

then released where captured. Information on species, number of animals of each species, age class, and habitat were recorded on VHS data sheets. Digital photos were taken to voucher each species and to

Figure 1. Map showing survey sites at Kirkham's farm.

document parasites and anomalies. JG and PS revisited the property on 15 March 2024 to survey for spring breeding amphibians. The survey on June 3 consisted of visiting all ponds and seasonally flooded wetlands. Three Wildlife Acoustics Song Meter SM4 Acoustic Recorders were placed adjacent to ponds and wetlands at sites 1 and 3 by AP. The meters recorded calls from 1 March 2024 until 11 June 2024. A few additional species observations by AP occurred outside the survey window. AP regularly visits and manages the farm. Two animals were taken as voucher specimens (*Acris gryllus* and *Lithobates kauffeldi*) and have been deposited in the Virginia Museum of Natural History. Digital photos and survey data sheets are deposited in the VHS digital and physical archives. A summary of survey effort at each site appears in Table 1.

Table 1. Summary of survey effort at six sites at Kirkham's Farm.

Survey Site	Number of Surveyors	Hours	Estimated Person Hours
1	4 (2 June)	.75	3
1	3 (2 June)	1	3
1	8 (3 June)	.75	6
2	4 (2 June)	.75	3
2	8 (3 June)	.75	6
3	4 (2 June)	.5	2
3	3 (2 June)	1	3
3	10 (3 June)	.75	7.5
4	4 (2 June)	.5	2
4	10 (3 June)	.5	5
5	4 (2 June)	.25	1
6	8 (3 June)	3	24
7	8 (2 June)	.3	2.4
7	2 (3 June)	1	2
Total		11.8	69.9

RESULTS

A total of 39 species (19 anurans, 5 salamanders, 4 turtles, 5 lizards, and 6 snakes) were found during the survey of Kirkham's Farm. A total of 208 animals were observed or hand captured during the survey. We documented a new county location for *Lithobates kauffeldi*. To our knowledge this survey documented more anurans than any other survey conducted by the VHS (19 species) (Gibson, 2023). Two adult female Southern Toads had 3 mm diameter skin pustules which look similar to reported trematode parasites in other amphibians. One adult *Lithobates catesbeianus* was observed to have a partially missing left arm. *Plestiodon laticeps* and *Sceloporus undulatus* were observed to be parasitized by ticks. Table 2 gives a summary of each species, total number of animals of each species and totals for each

site. Tables 3 - 5 summarize the data collected by the SM4 Sound Recorders at three sites. Scientific and English common names used throughout this paper follow Nicholson (2025).

Table 2. Summary of animals observed per site at Kirkham's Farm. (C = calling males, E = eggs)

Survey Sites	1	2	3	4	5	6	7	8	Total
Amphibians									
Acris crepitans	12+7C	1	6+12C						38
Acris gryllus	3+C		C						3
Anaxyrus a. americanus	5+C		C	1		1			7
Anaxyrus fowleri	2+1C	2	3+1C			1	3		13
Anaxyrus terrestris			C					10	10
Dryophytes chrysoscelis	3C	3C	1+4C	1C		1C	2C		15
Dryophytes cinereus			1+4C						5
Dryophytes femoralis	1+3C		C			1C			5
Dryophytes gratiosus			C						
Dryophytes squirellus						2			2
Gastrophryne carolinensis	C	1	1+C						2
Lithobates catesbeianus	1+3C		4+12C						20
Lithobates clamitans	3C		12C			2+1C			18
Lithobates kauffeldi		1							1
Lithobates palustris	C	1	C						1
Lithobates sphenocephalus	3+C		C					E	3
Pseudacris crucifer	C		1+C		1				2
Pseudacris feriarum							C,E		
Scaphiopus holbrookii						1			1
Ambystoma maculatum					E				
Ambystoma opacum			1	1					2
Notophthalmus viridescens					2	1			3
Plethodon cinerous			1			2			3
Plethodon chlorobryonis		1	2	5		10	1		19
Reptiles									
Chelydra serpentina	2	1							3
Sternotherus odoratus		1							1
Terrapene c. carolina		1		1		3			5
Plestiodon fasciatus						1	2		3
Plestiodon inexpectatus						1	1		2
Plestiodon laticeps							1		1
Sceloporus undulatus		2					4		6
Scincella lateralis			1			1			2
Carphophis a. amoenus			2			4			6

Coluber c. constrictor			1						1
Heterodon platirhinos							1		1
Nerodia s. sipedon	2								2
Storeria dekayi			1						1
Storeria occipitomaculata			1						1
Total	51	15	72	9	3	33	15	10	208

Table 3. Dates of calling activity for calls captured by the SM4 Sound Recorders placed at site 1 from 1 March 2024 until 11 June 2024.

Species	Dates of Calling Activity
Acris crepitans	4/13 - 6/11
Acris gryllus	4/8 - 6/11
Anaxyrus a. americanus	3/15; 4/1-4/2
Anaxyrus fowleri	4/28
Dryophytes chrysoscelis	5/14 - 5/29
Gastrophryne carolinensis	5/26
Lithobates catesbeianus	4/14 -6/11
Lithobates clamitans	4/28 - 6/11
Lithobates palustris	3/1 - 4/10
Lithobates sphenocephalus	3/1 - 5/17
Pseudacris crucifer	3/1 - 4/9

Table 4. Dates of calling activity for calls captured by the SM4 Sound Recorders placed at site 3 from 1 March 2024 until 11 June 2024.

Species	Dates of Calling Activity
Acris crepitans	4/15 - 6/12
Acris gryllus	4/14 - 6/12
Anaxyrus a. americanus	3/1 - 3/7; 3/15 - 3/16
Anaxyrus terrestris	4/2
Anaxyrus fowleri	3/31 - 6/12

Dryophytes chrysoscelis	4/2 - 6/7
Dryophytes cinereus	5/2 - 6/12
Dryophytes femoralis	5/24; 5/25; 5/27
Dryophytes gratiosus	5/8; 5/16; 5/26
Gastrophryne carolinensis	5/21 - 6/5
Lithobates catesbeianus	4/11 - 6/12
Lithobates clamitans	4/17 - 6-12
Lithobates palustris	3/3 - 4/12
Lithobates sphenocephalus	3/1 - 5/3
Pseudacris crucifer	3/1 - 4/12

Table 5. Dates of calling activity for calls captured by the SM4 Sound Recorders placed at site 3 (37°09'27.2"N 77°14'16.8"W) from 16 March 2024 until 11 June 2024.

Species	Dates of Calling Activity
Acris sp.	4/14 - 6/12
Anaxyrus a. americanus	3/16 - 3/17
Anaxyrus fowleri	4/1 - 6/12
Dryophytes chrysoscelis	4/9 - 6/12
Dryophytes cinereus	5/1 -6/12
Dryophytes femoralis	5/25, 6/4 - 6/7
Gastrophryne carolinensis	5/27
Lithobates catesbeianus	4/28 - 6/12
Lithobates clamitans	5/7 - 6/12
Lithobates palustris	3/16 - 4/16
Lithobates sphenocephalus	3/24, 4/4 - 4/5, 4/12 - 4/13, 4/23
Pseudacris crucifer	3/16 - 4/12

Annotated Checklist

Amphibians

1. *Acris crepitans* (Eastern Cricket Frog) Large numbers of Eastern Cricket Frogs were found at the two ponds on the property, sites 1 and choruses during the night survey and also during the day. A single individual was found on the forest floor on the way to Blackwater Swamp (site 2). Several male *Acris crepitans* were heard calling along the margin of Blackwater Swamp during the day on 2 June. Two adult cricket frogs were observed along the margin of Old Pond at site 1 and four adults were observed along the margin of a flooded road rut on 15 March 2024. SM4 Sound Recorders at sites 1 and 3 recorded males calling from 13 April until 12 June.

2. *Acris gryllus* (Southern Cricket Frog) At site 1, Old Pond, in addition to finding large numbers of Eastern Cricket Frogs, we also found three individuals (20% of cricket frogs) to be Southern Cricket Frogs. This species was also found on site 3, having been recorded calling by a SM4 Sound Recorder. Two specimens were retained and deposited in the Virginia Museum of Natural History. SM4 Sound Recorders at sites 1 and 3 recorded males calling from 8 April until 12 June.

3. *Anaxyrus a. americanus* (Eastern American Toad) The Eastern American Toad was found at four sites. At sites 4 and 6 single adults were found on the forest floor. At sites 1 and 3, metamorphs numbering in the dozens to hundreds were observed emerging from the two ponds. At site 1 five metamorphs were counted and recorded. SM4 Sound Recorders at sites 1 and 3 recorded males calling 3 March - 17 March and 1-2 April 2024. Most breeding activity occurs in quick one- or two-day spurts (explosive breeding).

Figure 2. *Anaxyrus americanus*.

4. *Anaxyrus fowleri* (Fowler's Toad) Adult Fowler's Toads were observed at sites 1-3 and 6-7. These were often on the forest floor, presumably foraging. A few individuals were found under cover objects such as logs or sheets of plywood (site 6). At least one male was heard calling at each of the two ponds (sites 1 and 3) during the night survey on June 2. The SM4 Sound Recorder from site 3 recorded males calling from 31 March until 12 June. The SM4 Sound Recorder from site 1 recorded calling only on 28 April.

5. *Anaxyrus terrestris* (Southern Toad) A Southern Toad was heard calling at the farm on 1 March 2024, the duration of the call was 6 seconds, shorter than the similar call of *Anaxyrus americanus*. Southern Toads were observed at site 8, in a temporary wetland in a cutover by site 7, and along the margin of a flooded road rut on 15 March 2024. At site 8, 10 adult toads were found in shallow

temporary seasonal wetlands. At 1233 h adults were observed calling, in amplexus, and several females were observed actively laying eggs. The duration of males calling was very short, lasting from 2 - 4 seconds on average. The temperature was 24°C. Two adult females were found at site 8 to contain 3-4 mm diameter skin nodules on the ventrum. One female had 9 nodules on the belly and chest and the other female had seven nodules on the ventral side of the mouth, chest, and belly. Both females appeared to be in good health and were actively laying eggs. The animals were not retained but photographs were taken. These nodules seem consistent with a description of encysted digenetic trematodes of the genus *Clinostomum* in Tiger Salamanders reported by Perinan et al. (2010). SM4 Sound Recorders at two sites in the large permanent ponds only produced one call record for this species on 2 April 2024 at site 3. Southern Toads at Kirkham's Farm may utilize shallower temporary wetlands more than the larger permanent ponds for breeding.

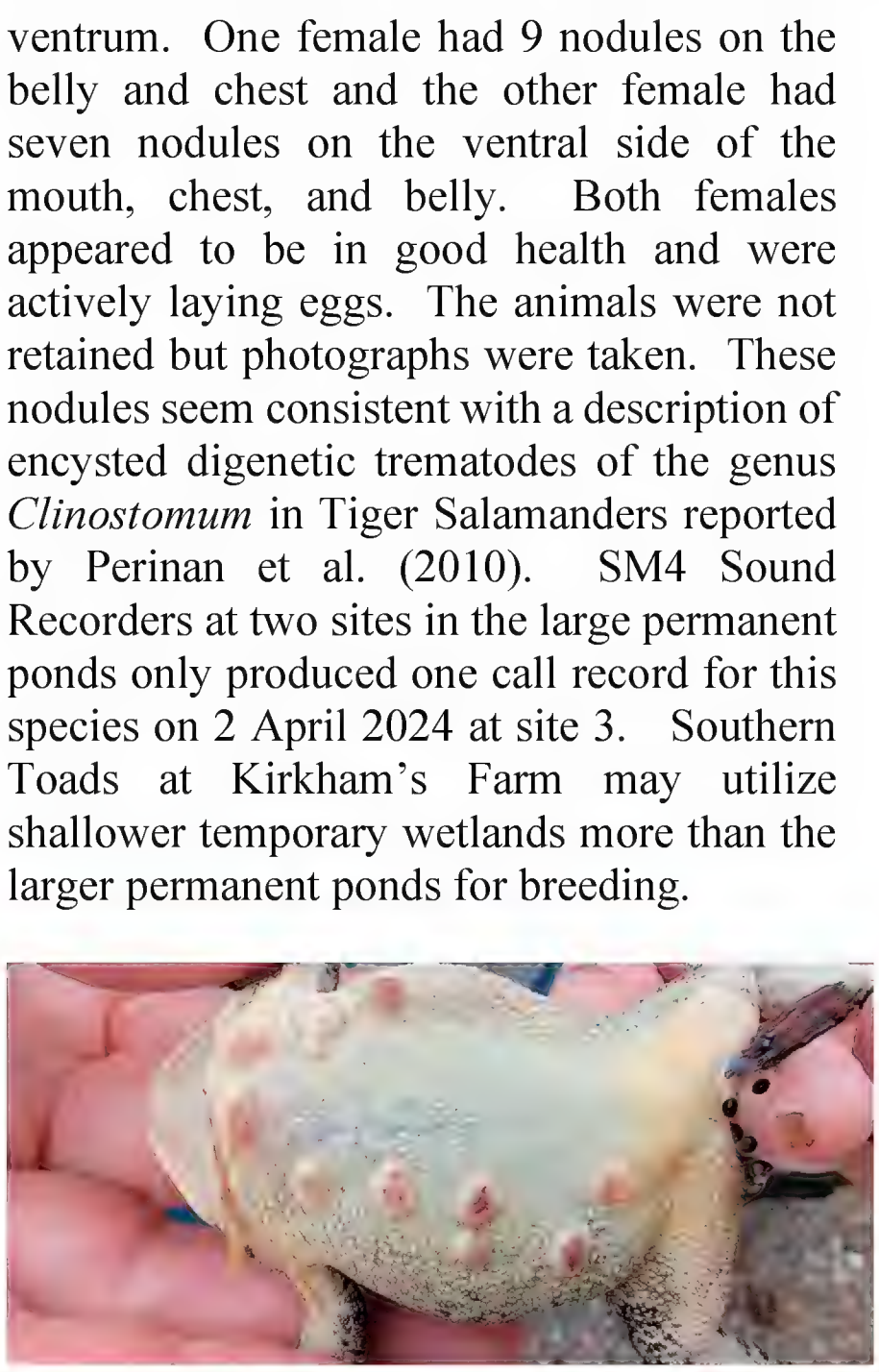

Figure 3. Anaxyrus terrestris with skin nodules.

Figure 4. Size of skin nodules on *A. terrestris.*

6. *Dryophytes chrysoscelis* (Cope's Gray Treefrog) Cope's gray Treefrogs were found calling at all sites except 5, which was a very small ephemeral wetland. An adult male was captured, examined and released at site 3 during the night survey where a small chorus was calling in a wetland on one end of the Big Pond. A SM4 Sound Recorder at site 1 recorded an undetermined number of males calling from 14-29 May. SM4 Sound Recorders at site 3 recorded males calling from 2 April to 12 June.

7. *Dryophytes cinereus* (Green Treefrog) A small Green Treefrog chorus was calling from a wetland section of site 3. The wetland had sedges and a few cattails emerging from shallow water. One adult was captured, examined and released. It had very little of the characteristic white stripe down the side. Males were captured calling on SM4 Sound Recorders from 2 April until 12 June at site 3.

Figure 5. *Dryophytes cinereus*.

8. *Dryophytes femoralis* (Pine Woods Treefrog) Pine Woods Treefrogs were heard calling at sites 1 and 6 during the June survey. A single adult was captured at site 1 on the ground, possibly heading to Old Pond. Males were recorded calling by two SM4 Sound Recorders on 24 May until 7 June at site 3.

9. *Dryophytes gratiosus* (Barking Treefrog) Barking Treefrogs were recorded at site 3 by the SM4 Sound Recorders on 8 May, 16 May and 26 May 2024. Multiple frogs were heard on the recording on 16 May with just single individuals heard on the other two dates.

10. *Dryophytes squirellus* (Squirrel Treefrog). Two adult Squirrel Treefrogs were captured on the forest floor, in the leaf litter at site 6. This species was not captured by any of the three SM4 Sound Recorders during the survey window.

Figure 6. *Dryophytes squirellus.*

11. *Gastrophryne carolinensis* (Eastern Narrow-mouthed Toad) Two adult Eastern Narrow-mouthed Toads were found under logs at sites 2 and 3. Both frogs were females. Males were recorded by SM4 Sound Recorders calling from 21 May until 5 June at sites 1 and 3.

12. *Lithobates catesbeianus* (North American Bullfrog) Choruses of North American Bullfrogs were calling by day, and during the night survey at both ponds (sites 1 and 3). The one adult captured at site 1 in the Old Pond had lost its left arm above the elbow. Bullfrogs were heard calling from 11 April until 12 June by three SM4 Sound Recorders at sites 1 and 3.

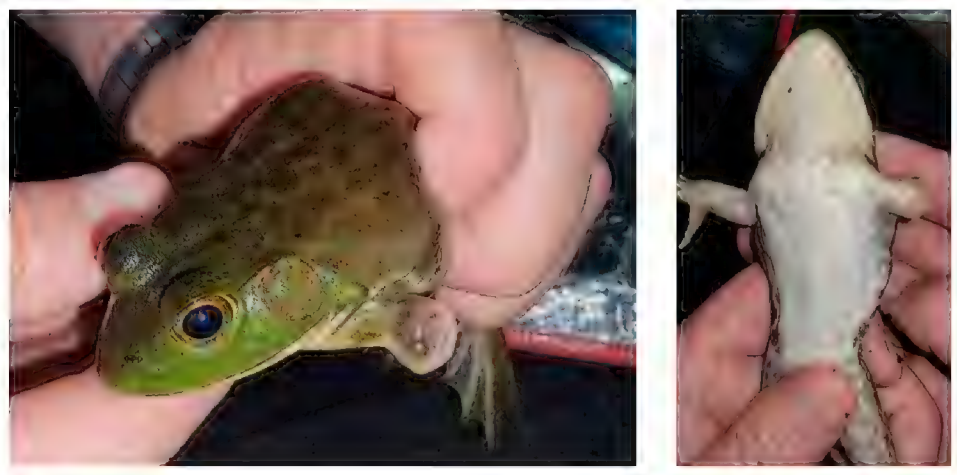

Figure 7. *Lithobates catesbeiana* with missing limb.

13. *Lithobates clamitans* (North American Green Frog) North American Green Frog choruses were heard during the day and during the night survey at both ponds (sites 1 and 3). The forest around the main barns at the Farm contained a stream from which a single male was heard calling on June 3. Two adults were captured, examined and released near this stream. SM4 Sound Recorders at sites1 and 3 captured males calling from 11 April until 12 June.

14. *Lithobates kauffeldi* (Atlantic Coast Leopard Frog) While setting traps at Blackwater Swamp a single adult Mid-Atlantic Coast Leopard Frog was captured from under a large piece of bark on the floodplain of the swamp. This specimen was retained and deposited in the Virginia Museum of Natural History. This represents only the second record for this species in Prince George County (see Munford, 2023b). This species was not recorded by SM4 Sound Recorders set at sites 1 and 3.

Figure 8. *Lithobates kauffeldi.*

15. *Lithobates palustris* (Pickerel Frog) A single adult Pickerel Frog was captured at the edge of Blackwater Swamp (site 2). However, SM4 Sound Recorders recorded large choruses of this species. Pickerel frogs were recorded calling from 1 March until 16 April at sites 1 and 3.

16. *Lithobates sphenocephalus utricularius* (Coastal Plains Leopard Frog) Numerous metamorph Coastal Plains Leopard Frogs were observed in Old Pond (site 1). Three were captured, examined and released. One large adult was observed but not captured at the edge of Old Pond during the night survey on 2 June. On 15 March 2024, 2 dead adult leopard frogs were found in shallow water at Old Pond (site 1). One frog had no obvious injuries, however the other appeared to have bite marks on one of the hindlimbs. Four egg masses with hatching tadpoles were observed in Old Pond. Several seasonally flooded wetland areas also contained egg masses with hatching tadpoles. A freshly laid Coastal Plains Leopard Frogs egg mass and also egg masses with hatching tadpoles were observed on 1 March 2024. Coastal Plains Leopard frogs were recorded calling by SM4 Sound Recorders from 1 March until 17 May at sites 1 and 3.

17. *Pseudacris crucifer* (Spring Peeper) Two metamorph Spring Peepers were captured, examined and released. One was in the small ephemeral pool (site 5) and one was on the ground near old buildings at the Big Pond (site 3). On 15 March 2024, an amplexed pair was observed in a flooded tire rut. Males were heard calling from 1 March until 12 April from three SM4 Sound Recorders at sites 1 and 3.

18. *Pseudacris feriarum* (Upland Chorus Frog) A single male was heard calling at 1314h from a temporary wetland in a cutover adjacent to site 7 on 15 March 2024. Numerous egg clusters were observed in shallow road ruts at multiple sites on this same date. This species was not recorded by three SM4 Sound Recorders at sites 1 and 3.

19. *Scaphiopus holbrookii* (Eastern Spadefoot) A single adult male Eastern Spadefoot Toad was found under a piece of 2x6 near the barns at site 6. It was in a small depression in the dirt under the board, and it was occupying this space with a female Southeastern Five-lined Skink about 0.5 meters from the Spadefoot Toad. This species was not recorded by three SM4 Sound Recorders at sites 1 and 3.

20. *Ambystoma maculatum* (Spotted Salamander) A Spotted Salamander egg mass was observed in an ephemeral pool at site 5 on 1 March 2024.

21. *Ambystoma opacum* (Marbled Salamander) Two adult Marbled Salamanders were found during the survey. The specimen from site 4 was an adult female found under a log in the forest bordering Dick's Branch. The specimen from site 3 was a juvenile found under a log in a small patch of deciduous woods about 30 meters from the shore of the Big Pond. Several larval Marbled Salamanders were dip-netted from the small ephemeral pool at site 5.

22. *Notophthalmus v. viridescens* (Red-spotted Newt) Two larval Red-spotted Newts were dip-netted from the small ephemeral pool at site 5. One red eft was found under a log in the deciduous forest surrounding the barns at site 6.

23. *Plethodon chlorobryonis* (Atlantic Coast Slimy Salamander) The Atlantic Coast Slimy Salamander was the most commonly found woodland salamander during the survey. Individuals were found at all sites except 1 and 5. Most were found under logs in a forest habitat. All age classes were found, from last year's young to a very large (154 mm TL) adult female.

24. Plethodon cinereus (Red-backed Salamander). One Red-backed Salamander was found at site 6 in September 2023. Several were found at site 2 prior to the ponds being constructed, in the hardwood bottom lands, years prior to 2024.

Reptiles

25. *Chelydra serpentina* (Snapping Turtle) Snapping Turtles were found at sites 1 and 2. A large adult was captured in the hoop trap set in Old Pond (site 1) and a small individual was observed but not captured while setting the traps on June 2. A small adult was captured in the hoop trap set in Blackwater Swamp (site 2).

26. *Clemmys guttata* (Spotted Turtle) A single adult spotted turtle was documented entering the ephemeral pool at site 5 during a fall rain event on 12 November 2022. The turtle was observed traveling from the north across the agricultural field into the pool. No spotted turtles were observed at this location during the June 2023 survey or subsequent site visits in 2024.

27. *Sternotherus odoratus* (Eastern Musk Turtle) A small Eastern Musk Turtle was captured in one of the baited hoop turtle traps set in Blackwater Swamp (site 2).

28. *Terrapene c. carolina* (Woodland Box Turtle) Woodland Box Turtles were observed at sites 2, 4 and 6. Most were adults; however, one juvenile was found at site 2 and one juvenile at site 6 was under a log.

29. *Plestiodon fasciatus* (Common Five-lined Skink) Several skinks were observed on June 1 and 2 but could not be captured to positively identify the species. The weather was cooler the morning of June 3 and skinks were captured to obtain a positive identification. A Common Five-lined Skink was captured at site 6 under boards near the barns. Two were captured from under cover objects at the Construction Storage Site (site 7).

30. *Plestiodon inexpectatus* (Southeastern Five-lined Skink) Two Southeastern Five-lined Skinks were captured. A juvenile was under boards at the Construction Storage Site (site 7), and a gravid female, probably in a depression constructed as a nesting site, was found under a 2x6 board at site 6.

31. *Plestiodon laticeps* (Broad-headed Skink) A single Broad-headed Skink was captured on the edge of the Construction Storage Site (site 7). This small male was found under loose bark on a log just inside a forested area. This animal was found parasitized by three ticks just behind the front legs.

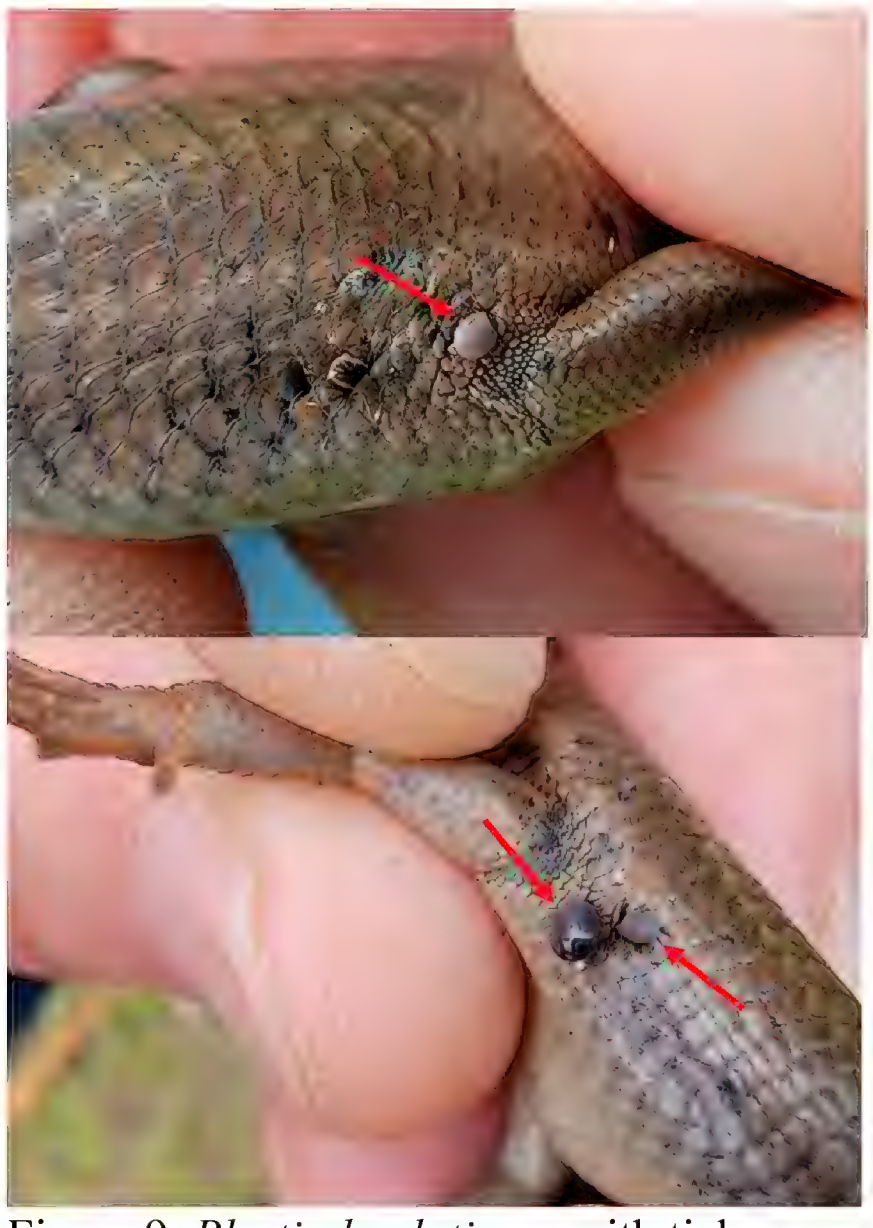

Figure 9. *Plestiodon laticeps* with ticks.

32. *Sceloporus undulatus* (Eastern Fence Lizard) Six Eastern Fence Lizards were found during the survey. Two were found in the deciduous forest surrounding Blackwater Swamp (site 2) and 4 were found at the Construction Storage Site (site 7). One male at site 7 was found parasitized by a tick. We were also able to observe a small adult jump from a tree to plywood we were flipping to capture and consume a Wood Roach. The same animal then ran to and consumed a second roach exposed on the plywood.

Figure 10. *Sceloporus undulatus* with tick.

33. *Scincella lateralis* (Little Brown Skink) Little Brown Skinks were captured at sites 3 and 6. Both were under logs in a forested area.

34. *Carphophis a. amoenus* (Eastern Wormsnake) Eastern Wormsnakes were captured, examined and released at sites 3 and 6. Most were found under logs in forested sections of the site. Two at the main barns at site 6 were juveniles found under the same cinder block.

35. *Coluber c. constrictor* (Northern Black Racer) An adult Northern Black Racer was observed along the shore of the Big Pond (site 3). When surrounded, the snake swam into the pond where one or more bass struck at the snake, which then circled around people on the shore to disappear into vegetation.

36. *Heterodon platirhinos* (Eastern Hog-nosed Snake) An adult, melanistic, Eastern Hog-nosed Snake was found in a grassy section of the Construction Storage Area (site 7). Upon capture, the snake went into its "play dead" behavior.

Figure 11. *Heterodon platirhinos* behavior.

37. *Nerodia s. sipedon* (Northern Watersnake) Two Northern Watersnakes were observed at the Old Pond (site 1) during the night survey on June 2. One was a large adult in the water near the shore in a section of shrub vegetation. A second small adult was captured, photographed and released in shallow water near the open shore.

38. *Storeria dekayi* (Dekay's Brownsnake) A juvenile Dekay's Brownsnake was found on 26 August 2023. It was found at site 3 near an agricultural field under matted dead grass and wheat stubble.

39. *Storeria occipitomaculata* (Red-bellied Snake) A small adult Red-bellied Snake was captured, photographed and released at site 3. It was found under a log in a wooded section near the Big Pond (site 3).

DISCUSSION

Target species for this survey included the large aquatic salamanders, the Two-toed Amphiuma (*Amphiuma means*), the Dwarf Waterdog (*Necturus punctatus*) and the Eastern Lesser Siren (*Siren i. intermedia*). Despite the use of numerous hoop, crayfish and minnow traps, and dip-netting, we were unable to capture any of these targeted species. All three species inhabit sluggish, slow moving waters with silt or leaf packs on the bottom for cover (Petranka, 1998) which is characteristic of Blackwater Swamp. Meffe and Sheldon (1987) report the Dwarf Waterdog is typically found in larger and deeper sections of streams with muddy and leafy sediments. According to the Fish and Wildlife Information Service database the Dwarf Waterdog had been collected in May and June further northwest in Blackwater Swamp in 1993, so they should be present. It is possible the habitat is so vast, and the salamanders so dispersed we were unable to encounter any. However, seven were captured in Fontaine Creek in Greensville County on 1 April 1996 and twelve were captured at one time in the Nottoway River in Sussex County on 22 April 1996 (Roble et al., 1999), so they may not be widely dispersed.

Another surprising result of this survey was the lack of aquatic turtles. One would think the Blackwater Swamp and the ponds at sites 1 and 3 would contain numerous turtle species. Indeed, the FWIS Database has entries for the Yellow-bellied Slider (*Trachemys s. scripta*), Red-eared Slider (*Trachemys scripta elegans*), Eastern River Cooter (*Pseudemys c. concinna*) and Painted Turtle (*Chrysemys p. picta*) in the Blackwater Swamp near Petersburg. Again, perhaps the swamp is vast and animals are dispersed, or the swamp is smaller on this property, to explain the lack of aquatic turtles. It is also possible the canopy over the swamp is too closed for basking turtles.

A result that was not surprising was the large number of anurans observed. Southeastern Virginia is known for the plethora of anurans, as the southwest is for the large number of salamanders. The coastal plain, with its

relatively flat terrain is ideal for retaining water, creating a variety of wetlands utilized by anurans. These surveys recorded 19 of the 22 species known for the county. We added the second record for *Lithobates kauffeldi* for Prince George County. This record is 2.88 kilometers shy of being the most western record for this species in Virginia. The current most western record is in Hanover County (37.5484, -77.2384) (Munford, 2023a)

Frogs not documented during this survey but are known for the county include: Brimley's Chorus Frog (*Pseudacris brimleyi*), the Southern Chorus Frog (*Pseudacris nigrita*), and the Little Grass Frog (*Pseudacris ocularis*). The two Chorus Frogs were not heard during the 15 March visit. They may be present on the property but were missed. A survey, or the use of sound recorders, in February or early March might add them to the list for this property. The Little Grass Frog breeds from at least February through August and should have been recorded if present on the property. The one record of Little Grass Frogs in the FWIS database from Prince George County is farther southeast, near the border with Sussex County and so may not be present on this property.

Salamanders not found but documented for the county include: the Two-toed Amphiuma (*Amphiuma means*), the Northern Dusky Salamander (*Desmognathus fuscus*), the Dwarf Waterdog (*Necturus punctatus*), the Eastern Lesser Siren (*Siren i. intermedia*), and the Many-lined Salamander (*Stereochilus marginatus*). We have addressed the Amphiuma, Dwarf Waterdog and Siren above. Many-lined Salamanders may be easier to find in the early spring than later when our survey occurred. The FWIS Database does not contain any recent records for Virginia with a date included. However, Ty Smith and Evan Spears (pers. comm.) dip-netted one recently in Sussex County in early spring in a leaf pack. Thus, another survey in February or March might prove useful for several species. There were not many vernal pools on the property. Dip-netting those did not produce any Spotted Salamander larvae, which should be present in June. There was a single egg mass observed at site 5. Spotted Salamanders are probably rare on this property as other eggs and larvae would have been seen if they were prevalent. There was only a single stream searched on the property during the survey. It did not contain flowing water so the habitat is not ideal for Northern Dusky Salamanders. The only site reporting Dusky Salamanders in the FWIS Database for Prince George County is in Bailey Creek on Fort Gregg-Adams (formerly Fort Lee) Military Base, to the northwest of Kirkham's Farm. They may not occur on this property.

The Kirkham Farm is being managed for wildlife at the present time. However, we have a few recommendations that would improve the area for amphibians and reptiles in particular. We saw several areas that had been clear-cut for timber in the recent past. Clear-cutting is known to decrease the habitat for amphibians in particular since it increases sunlight reaching the ground, drying the area. Amphibians generally need a moist skin for respiration, so this can stress them. Patches of forest which are clear-cut typically experience a sudden decrease in salamander population levels which can take years to recover (Reichenbach and Sattler, 2007). Milder timber treatments which retain partial canopy cover do not see such large decreases (op. cit.). If clear-cutting is used, smaller areas staggered over time allows for more rapid recolonization since salamanders have less distance to travel when the canopy recovers. In timbered areas, the woody debris could be left on the ground, which helps provide cover for a variety of herps so we endorse that practice.

The Kirkham Farm is currently constructing several wetland areas, one which will retain shallow water year-round, the other to be seasonally filled and drained. These areas will not only provide habitat for waterfowl, but amphibians as well. If the temporary wetland is filled in early spring when amphibians are breeding, and drained in or after late summer, after larval amphibians have metamorphosed and left the water, it would provide maximum benefit to the amphibians breeding in the wetland. The reintroduction of Longleaf Pine and controlled burns should help maintain some habitat in early successional stages. This could benefit some reptiles and amphibians dependent on these habitats for thermoregulation and nesting sites. Longleaf Pines are also the preferred habitat of the state threatened Mabee's Salamander and the federally endangered Red-cockaded Woodpecker (*Leuconotopicus borealis*). Deliberate attempts are being made to protect the ephemeral shallow wetlands in which Southern Toads have been found to be breeding. The large number of anuran species found on this property highlights its importance in conservation efforts for the frogs and toads of Virginia. The addition of these temporary, fish-free wetlands should significantly enhance the value of the property in ongoing conservation efforts.

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ACKNOWLEDGEMENTS

We would like to thank Adam Priestley for being a very gracious host of this survey. Special thanks to Susan Watson for helping set crayfish, minnow, and turtle traps on Friday. Thanks also to Cypress Woods Land Stewards, LLC for allowing us to survey their property. We also thank the following volunteers for participating in the survey: Adam, Michelle, Sadie and Avery Priestley, Kelly Clinevell, Allison Curran, Jason Gibson, Karl Kratz, Larry Mendoza, Paul Sattler, Ty Smith, Evan Spears, David and Wes VanGelder, and Susan Watson.

Figure 12. Group Photo, Kirkham's Farm Survey.

***Dryophytes cinereus* (Green Treefrog)** VA: City of Fredericksburg, Undeveloped Road / Trail near a Nursing home (38°19'06.5"N; 77°30'48.7"W). 18 October 2025. Matthew Anthony and Erin C. Anthony.

City Record: A juvenile green treefrog was found on the footpath along a retention pond behind some apartments. This is a common species in this area and has been recorded from the surrounding counties of Stafford and Spotsylvania. There are many locations within the city of Fredericksburg that could provide habitat for this species. A photo was submitted to the VHS archives (#902). The frog was initially spotted by Matthew Anthony and identified by Erin C. Anthony.

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***Dryophytes gratiosus* (Barking Treefrog).** VA: Chesterfield County. Retention ponds, site location withheld. 18 and 19 June and 16 July 2025. Ryan Niccoli.

Confirmation of record: On 18 and 19 June 2025, a chorus of approximately 15 to 20 Barking Treefrogs was observed within a retention pond (Pond A) in southern Chesterfield County. During a revisit on 25 June 2025, 1 or 2 calling Barking Treefrogs were observed. During a revisit on 16 July 2025, both Pond A and a neighboring retention pond (Pond B) had choruses of approximately 20 or more Barking Treefrogs. Five live Barking Treefrogs, including 1 amplexing pair (not photographed), and one deceased Barking Treefrog were found on a road adjacent to Pond B during the 16 July 2025 visit, likely attracted to artificial lights posted at this location. Pond A and Pond B are fenced commercial retention ponds approximately 120 meters apart fed by parking lot runoff. Pond A was approximately 50 by 27 meters and Pond B was approximately 75 by 33 meters. Both ponds were similar in vegetative composition, with the wetted portions consisting of hydrophytic vegetation including approximately 2 meters of *Peltandra virginica* (Arrow Arum)(to a depth of approximately 0.3 meters), followed by approximately 3 to 4 meters of *Typha sp.* (Cattail species)(to a depth of approximately 1 meter), and then 3 to 4 meters of *Brasenia schreberi* (Watershield)(depth unknown) before becoming open water (depth unknown, likely deeper than 2 meters). Sloped upland borders of about 4 to 5 meters from the wetted edge to a fence consisted of shrub-scrub vegetation including *Rhus copallinum* (Winged Sumac), *Rhus glabra* (Smooth Sumac), *Rubus sp.* (Blackberry species), and sapling *Acer rubrum* (Red Maple). A 4 to 5 meter buffer of maintained grass and some ornamental plantings extended from the fence to paved surfaces or to forest on all sides. Commercial land borders Pond A on the southern, eastern, and northern sides and Pond B on the southern and eastern sides. The western side of both ponds is bordered by greater than 160 hectares of largely unfragmented mixed pine/hardwood forest, punctuated by residential development (cleared yards and neighborhood roads which do not bisect the habitat completely). A few high-trafficked,

two-lane roads separate this habitat from more extensive forested habitats. All calling Barking Treefrogs appeared to be positioned on top of the Watershield and seemed evenly distributed within this microhabitat. No individuals were observed in any other part of the ponds. One individual was captured and photographed on 19 June 2025 (VHS Archive #859). Two individuals were captured and photographed on 16 July 2025 (VHS Archive #859). No attempt was made to verify egg deposition at the site. Records for this species are also present within the neighboring counties of Amelia, Dinwiddie, and Prince George. However, the most recent Virginia Department of Wildlife Resources records of this species from within Chesterfield County date from 1975 and 1978. This record represents an update in the current status of the species within Chesterfield County, and this observation indicates that the species is still reproductive in the area.

Ryan Niccoli
Chesterfield, VA

***Dryophytes gratiosus* (Barking Treefrog).** VA: King and Queen Co., Co. Rt. 602 (4 locations, exact coordinates of sites not disclosed), 12 June 2024 and 27 July 2024. S. M. Roble.

County Record: The Barking Treefrog was formerly recognized as a state threatened species in Virginia, but it was delisted in recent years due to an increasing number of records from multiple counties in the Coastal Plain and Piedmont regions. Mitchell & Reay (1999. Atlas of Amphibians and Reptiles in Virginia. Special Publication Number 1, Wildlife Diversity Division, Virginia Department of Game and Inland Fisheries, Richmond, VA. 122 pp.) plotted records for only four counties (Chesterfield, Isle of Wight, Mathews, and Surry), but various observers have added 14 more political jurisdictions such as Gloucester, Greensville, Nottoway, Prince George, and Sussex counties and the Cities of Suffolk and Virginia Beach (see range map on VHS website and in Kleopfer et al., 2021. A Guide to the Frogs and Toads of Virginia. Bureau of Wildlife Resources Special Publication 3, 2nd Edition. Virginia Department of Wildlife Resources, Richmond, VA. 48 pp.). It is unclear if the recent increase in the number of reports of barking treefrogs is due to a range and/or population expansion by the species or if more observers are searching appropriate habitats during the breeding season. My own limited surveys have resulted in the discovery of more than a dozen new populations in several counties, but my efforts to rediscover the species at or near the two historical sites (last record 1978) in Chesterfield County have been futile to date. Prior to the present report, the northernmost records of barking treefrogs in Virginia were from the Middle Peninsula in Gloucester County (Rose, 2017. Field notes. Catesbeiana 37(2): 124). The species also occurs in eastern Maryland and New Jersey, but it is not known from

Virginia's Eastern Shore (Mitchell. 2002. An overview of amphibian and reptile assemblages on Virginia's Eastern Shore, with comments on conservation. Banisteria 20: 31–45; Mitchell. 1999. Checklist and keys to the amphibians and reptiles of the Eastern Shore of Virginia. Catesbeiana 19(1): 3–18).

Near dusk on the evening of 12 June 2024, I heard the faint, distant calls of what I perceived to be a chorus of barking treefrogs. I returned to two ponds along County Route 602 in the Dragon Run State Forest in King and Queen County that I had surveyed for dragonflies earlier in the day with the expectation that the frogs would be present at one or both ponds. However, the only treefrog species that I heard at both ponds was Cope's Gray Treefrog (*Dryophytes chrysoscelis*). Continued searching eventually revealed the chorus was present at a more distant private pond that was located well off the county road. I made an audio recording of the chorus that potentially contained dozens of barking treefrogs. I returned to the same area of King and Queen County on 27 July 2024 to conduct additional surveys for rare dragonflies. While wading around the edge of a small woodland pond I detected an adult male barking treefrog resting in a buttonbush (*Cephalanthus occidentalis*). About an hour later, I waded a larger, deeper pond farther down the road, again primarily in search of dragonflies, and found another male barking treefrog resting in buttonbushes. Curiously, barking treefrogs had not been calling at either of these ponds on the night of 12 June, but they did so after dark on 27 July. On the latter night, this species was also calling at the private pond discovered a month earlier plus in a flooded roadside clearcut. I obtained both photographs and recordings on 27 July to document this new county record. The King and Queen County sites extend the Virginia range of *Dryophytes gratiosus* approximately 31 km NNW from the Gloucester County sites documented by Rose (op. cit.) and 42 km NW from the only known site in Mathews County. Continued searching of Virginia's Middle Peninsula and Northern Neck may reveal the presence of additional populations of barking treefrogs. A digital photo (VHS #883) has been deposited in the VHS digital archives.

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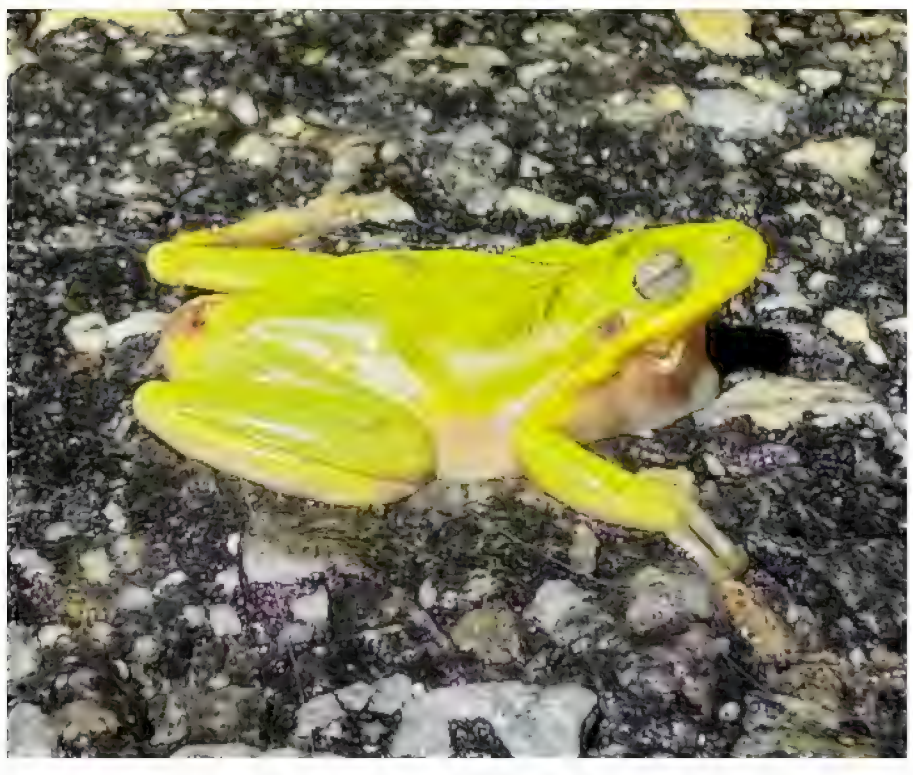
Dryophytes squirellus (Squirrel Treefrog) VA: King and Queen Co., Zion Church Rd (37° 43' 54.08"N 76° 51' 58.06"W). 8 June 2025. Jake Galla.

County Record: After considerable rainfall in the late hours of June 8th, 2025, I observed a dead on road (DOR) Squirrel Treefrog (Dryophytes squirellus) adjacent to a pine forest on Zion Church Rd in King and Queen County. Squirrel Treefrogs are found along the Atlantic Coastal Plain from Virginia to the Florida Keys, and along the Gulf Coastal Plain from south Florida to eastern Texas (Mitchell J.C. and K.K. Reay 1999, Atlas of Amphibians and Reptiles in Virginia. Special Publication Number 1,Virginia Department of Game and Inland Fisheries, Richmond, VA 122pp.).

While there are breeding populations in the adjacent King William County, no Squirrel Treefrogs have been recorded in King and Queen County until now. A digital photograph was taken of this amphibian and was deposited in the VHS archive (#857).

Jake Galla
Richmond, VA



***Lithobates clamitans* (North American Green Frog)**: VA. City of Portsmouth, Defense Fuel Support Site Craney Island (36.88801°N; 76.37593°W) on 6 May 2025. Christopher E. Petersen.

City Record: While performing a herpetological survey of Navy property on Craney Island, I encountered a frog located in a concrete-lined stormwater ditch. Upon capture and examination, it was determined to be a North American Green Frog. This species is a new record for the City of Portsmouth. This occurrence helps fill a gap in the distribution of this species in the southeastern corner of Virginia. The weather on 6 May consisted of mostly sunny skies with a high temperature of (26°C). A digital photograph (VHS Archive #874) was submitted as a voucher for this observation.

Christopher E. Petersen
Chesapeake VA

***Lithobates palustris* (Pickerel Frog),** VA. Middlesex County, Church View, 2379 Wares Bridge Rd. 21 September 2025. Ian Adrian.

County Record: In Virginia the Pickerel Frog has a state-wide distribution, being found in all but 5 counties, which are located along the eastern seaboard. They are frequently found in a variety of wetlands and consume a variety of invertebrates. Here I report the first record of a Pickerel Frog in Middlesex County. On 21 September 2025 I was walking towards my back yard to check on my chickens and spotted a frog sitting near my driveway. I obtained a photograph of the frog and sent it to the Virginia Herpetological Society (VHS Archive #881) for identification. I was informed the frog was a Pickerel Frog and there was no previous record of this species in Middlesex County. This record thus reduces the number of counties for which there is no record to four, and helps to fill a gap in the eastern distribution of the frog.

Ian Adrian
Church View, VA

***Eurycea bislineata* (Northern Two-Lined Salamander)** VA: City of Falls Church, Isaac Crossman Park (38° 53' 00.5" N 77° 09' 37.0" W). 21September 2025. Matthew Anthony and Erin C. Anthony.

City Record: On 21 September 2025 we were hiking in the Isaac Crossman Park and found a northern two-lined salamander under the bark of a log along the trail. This is not an unexpected record, since there are records in Fairfax and Loudoun Counties to the west (https://www.virginiaherpetologicalsociety.com/amphibians/salamanders/northern-two-lined-salamander/index.php) and Maryland to the east (Cunningham and Nazdrowicz. 2018. The Maryland Amphibian and Reptile Atlas. Johns Hopkins University Press, Baltimore, MD 283 pp.). The Northern and Southern Two-lined Salamanders are difficult to distinguish morphologically but Falls Church lies well north of the contact zone (Sattler and Brophy. 2019. Distribution, Hybridization, and Taxonomic Status of Two-lined Salamanders (*Eurycea bislineata* complex) in Virginia and West Virginia. Banisteria 52:28-36). Falls Church is highly urbanized and incredibly small. It is lacking in public trails with woodland habitat for species such as this to be found within city limits. The Fish and Wildlife Information System only lists two amphibian and 5 reptiles for the city. With a bit more exploration on private properties and local parks, I believe the species list for Falls Church can grow. A photo of the salamander was sent to the VHS as a voucher for this record (VHS Archive #879).

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***Pseudotriton ruber* (Red Salamander).** VA: Grayson County. Mount Rogers National Recreation Area, unnamed tributary to Helton Creek on north slope of Bluff Mountain (36.629920, -81.586357) 31 May 2024. Anthony Brais.

Elevation Record: Red salamanders (**Pseudotriton ruber)** range throughout the Blue Ridge physiographic province of eastern North America including Virginia (https://www.virginiaherpetologicalsociety.com/amphibians/salamanders/northern-red-salamander/index.php;https://www.virginiaherpetologicalsociety.com/amphibians/salamanders/blue-ridge-red-salamander/index.php). Individuals of this species are reported as uncommon above 1,200 m. (Petranka, J.W. 1998. Salamanders of the United States and Canada. Smithsonian Institution Press. Washington, D.C. 499pp.) I want to report a new observation of P. ruber in Virginia above 1,200 m. Two larval P. ruber were found in a seepy first order unnamed tributary to Helton Creek at an elevation of 1,370 meters on the north slope of Bluff Mountain. The photos of both individuals were deposited in the VHS Archive (# 904) as a voucher for this observation. Elevation was derived from a United States Geological Survey (USGS) 1/3 arc second digital elevation model (DEM) "*n37w082 20240611*". P. ruber were also found with the Northern Dusky Salamander (Desmognathus fuscus), Blue Ridge Dusky Salamander (Desmognathus orestes), Kanawha Black-bellied Salamander (Desmognathus kanawha) and Blue Ridge Two-lined Salamander (Eurycea wilderae).

To the best of my knowledge, this represents the highest P. ruber documented in Virginia from review of citizen science, museum record and literature sources. James and Della Organ documented P. ruber from Byars Creek on the southern slope of Whitetop Mountain at 1,219 m, University of Michigan Museum of Zoology (UMMZ) 120879, Whitetop Mountain at 1,158 m (UMMZ 120709) and Big Creek Branch on the north slope of Whitetop Mountain at 1,135 m (UMMZ 120713). In adjacent Ashe County, North Carolina, a record of P. ruber is known from 1,359 m from a springhouse on Bluff Mountain (North Carolina Museum of Natural Sciences [NCSM] 43391. Elsewhere in the southern Appalachians north of the French Broad River, P. ruber has been reported in Carter County, TN at 1,285 m (NCSM 43465) and Cardwell County, NC at 1,209 m (NCSM 96817).

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***Carphophis amoenus amoenus* (*Eastern Wormsnake*)**: VA. City of Portsmouth, Defense Fuel Support Site Craney Island (36.88420°N; -76.38032°W) on 20 March 2025. Christopher E. Petersen.

City Record: While performing a herpetological survey of naval property on Craney Island, I encountered an Eastern Wormsnake under a log within a mixed pine and deciduous forest. Although this species has confirmed occurrences nearly throughout eastern and central Virginia, including all cities and counties surrounding Portsmouth, this is a new record for the City of Portsmouth. This occurrence helps fill a gap in the distribution of this species in the southeastern corner of Virginia. The weather on 20 March consisted of mostly sunny skies with a high temperature of (26°C). A digital photograph (Archive #867) was submitted to the VHS as a voucher for this observation.

Christopher E. Petersen
Chesapeake VA

***Cemophora coccinea copei* (Northern Scarletsnake).** VA: Prince George Co., Carson area, near Horseshoe Road [lat./long. coordinates: 37.03613, -77.36403]. 09 June 2025. Lindsey Birch.

Confirmation Record/Rare Observation: Lindsey Birch found and photographed a Northern Scarletsnake and moved it to safety from a forested area being cleared for a horse pasture, in Prince George County, near the community of Carson. She also found two more individuals of this species at this site, on this same day, and similarly moved them out of harm's way. She posted a photo on Facebook, and her post was brought to the attention of Susan Watson of the Virginia Department of Wildlife Resources (VDWR). This species is very rarely observed in Virginia. There are two previous records of this species in Prince George County, but they are likely more than 27 years old, as these records were verified by Dr. Joseph Mitchell in 1998, but without details, such as collection date, and exact coordinates. This observation from June 9 of this year constitutes a confirmation record for this species in this county and is significant as a rare observation of this species, in Virginia. There are currently less than ten Virginia records with known details for this species, ranging from 1996 to 2023, in VDWR's Species Observation (SppObs) Database, available on VDWR's Virginia Fish and Wildlife Information Service (VAFWIS). Thera are also 37 additional records (including the older two for Prince George) that are all from data verified by Dr. Mitchell, but without known details, such as collection date and exact coordinates. Lindsey's

voucher photographs are included with this field note submission (VHS Archive #868).

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***Diadophis punctatus punctatus* (Southern Ring-necked Snake)**: VA. City of Portsmouth, Defense Fuel Support Site Craney Island (36.88640°N; 76.37969°W) on 20 May 2025. Christopher E. Petersen.

City Record: While performing a herpetological survey of Navy property on Craney Island, I encountered a snake under a discarded piece of metal within a mixed pine and deciduous forest. Upon capture and examination, it was determined to be a Southern Ring-necked Snake. Several other individuals have since been found at the naval installation. This species is a new record for the City of Portsmouth. This occurrence helps fill a gap in the distribution of this species in the southeastern corner of Virginia. The weather on 20 May consisted of mostly sunny skies with a high temperature of (22°C). A digital photograph was submitted to the VHS (Archive #870) as a voucher.

Christopher E. Petersen
Chesapeake VA

***Lampropeltis triangulum* (Eastern Milksnake)**: VA, City of Waynesboro, 736 Harmon Avenue. 4 June 2025. Kaylynn and Nathan Weeks.

City Record: We have a gully in our back yard with a bridge going over it. On 4 June we saw a snake which appeared to have come out from under the bridge. We have a lot of cats around so they were surprised to see it. We took a photograph of the snake and sent it to the VHS Herp Identification website (VHS Archive #873). We were told it was an Eastern Milksnake and that it had not been previously reported from the City of Waynesboro. The snake went on its way and we haven't seen it since. The Eastern Milksnake is found throughout the western portion of Virginia, including the County of Augusta, which surrounds Waynesboro. This report thus helps fill a gap in the distribution of this species in Virginia.

Victoria Weeks
Waynesboro, VA

***Nerodia sipedon sipedon* (Northern Watersnake)**: VA. City of Portsmouth, Defense Fuel Support Site Craney Island (36.88956°N; 76.36594°W) on 4 April 2025. Christopher E. Petersen.

City Record: While performing a herpetological survey of Navy property on Craney Island, I encountered a snake swimming in the shallow water of a concrete-lined stormwater ditch Upon capture and examination, it was determined to be a subadult Northern Watersnake. Although this species has confirmed occurrences nearly throughout Virginia, this is a new record for the City of Portsmouth. This occurrence helps fill a gap in the distribution of this species in the southeastern corner of Virginia. The weather on 4 April consisted of cloudy skies with a high temperature of (31°C). A digital photograph (VHS Archive #875) was submitted as a voucher for this observation.

Christopher E. Petersen
Portsmouth VA

***Opheodrys aestivus* (Rough Green Snake)**: VA, City of Danville. 219 Parker Drive. 11 July 2025. Elizabeth Dickens

City Record: The Rough Green Snake has a state wide distribution. It is an arboreal species consuming a wide variety of insects it finds in the bushes and trees in which it lives. On 11 July 2025 the Southwest Virginia Wildlife Center received an injured Northern Green Snake (Opheodrys aestivus) from Danville City. It was looking the worse for wear, but we are hopeful that it will make a full recovery after getting its head caught between two fence pickets! It weighed 22g. Elizabeth Dickens has seen other Rough Green Snakes at Angler's Park in Danville. We checked the Virginia Herpetological Society range map and saw that this species is not currently reported for Danville. The rescue location is 219 Parker Rd, which is 0. 5 km from the city limit line. A photo was deposited in the VHS Archive (#858) as a a voucher for this observation.

Kayla Short
SWVA Wildlife Center

***Pantherophis guttatus* (Red Cornsnake),** VA, King and Queen County, 2543 Bradley Farm Rd. 28 September 2025. Jonathan Crump.

County Record: The Red Cornsnake is a larger terrestrial snake with an average length of 122 cm (3-4 feet). They are rarely encountered as they spend much time underground in rodent burrows and tree root canals (https://www.virginiaherpetological society.com/reptiles/snakes/corn-snake/ index .php). Adults can be quite colorful with red-brown blotches down the body, although young are more subdued in color. On 28 September 2025 I was working in my garage when I noticed a small juvenile snake. I photographed the snake then relocated it to the woods behind my house. A copy of the photograph was sent to the Virginia Herpetological Society for a positive identification. I was informed the snake was a Red Cornsnake and that no previous record was available for King and Queen County, but it is recorded in Caroline County to the northwest and Essex to the northeast. This record thus helps to fill a gap in the distribution on this snake. The photograph was submitted to the VHS Archive (#882) as a voucher for this observation.

Jonathan Crump
King and Queen County, VA

Storeria occipitomaculata **(Red-bellied Snake)**: VA, Pulaski County, Dublin, Black Hollow Road, Bloomers Mountain, Jefferson National Forest. 29 June 2025. James Heath.

County Record: The Red-bellied Snake is a small secretive snake found in a variety of habitats. They are a dietary specialist consuming primarily slugs, but have been known to consume a variety of other invertebrates (https://www.virginiaherpetological society.com/reptiles/snakes/northern-red-bellied-snake/index.php). They are nocturnal, but can be found by day under various cover objects.

My wife, daughter and I go herping every summer so we know different places to go and this site is one of them. It's on national forest land and looks like an old dumping ground. There are tires, shingles and a lot of other debris for snakes, turtles and lizards to hide under. We found two Red-bellied Snakes. One of them was under a 2x8 board and the other was under a shingle pile. I photographed one of the snakes and sent the photo to the Virginia Herpetological Society (VHS Archive # 863) as a voucher. There are records for Giles County to the north and Montgomery County to the east, so this observation helps fill a gap in the distribution of the Red-bellied Snake in western Virginia.

James Heath
Dublin, VA

Thamnophis saurita **(Common Ribbon-snake)** VA, Middlesex County, 2379Wares Bridge Road. 9 October 2025. Ian Adrian.

County Record: The Common Ribbonsnake is a semiaquatic snake typically found near some type of permanent or semi-permanent water where they feed on amphibians and small fish (https://www.virginiaherpetological society.com/reptiles/snakes/common-ribbonsnake/index.php). In Virginia it has a conservation status of IVa. On 9 October 2025 while walking around a meadow on my property, I noticed a small snake basking atop a pine stick, along the forest's edge. I managed to get a photograph of the snake before it crawled off and sent a copy to the VHS Archive (#898). The Common Ribbonsnake has a spotty distribution in Virginia, found in most areas except the far southwestern portion. The only adjacent county with a record is Gloucester.

Ian Adrian
Church View, VA

***Thamnophis saurita* (Common Ribbonsnake)** VA. King and Queen County, Forest Road off Wares Bridge Rd. (approximately -37.68240° N, 76.73493° W). 16 November 2025. Ian Adrian.

County Record: The Common Ribbonsnake is a semiaquatic, slender, terrestrial snake (Mitchell, J.C. 1994. The Reptiles of Virginia. Smithsonian Institution Press. Washington, DC. 352pp.). Most of its diet is obtained from near or in the water. The activity period for this snake is given as late February to early November (Op. Cit.) so this late observation is not so unusual for this species. On 16 November 2025 I was walking with a friend when my companion nearly stepped on the ribbon snake who was basking in the sun. It was warm for mid-November, being sunny and a temperature of 18-21oC. I took a photo of the snake and sent it to the VHS (Archive #904) when I recognized there was no vouchered record for King and Queen County. There are few records of the Common Ribbonsnake in the Middle Peninsula with only Gloucester and Middlesex (Adrian, I. 2025. Thamnophis saurita, Field Note. Catesbeiana 45(2):106) Counties to the south recognized with a voucher so this observation helps fill a void in the distribution of this species.

Ian Adrian
Church View, VA

***Thamnophis sirtalis* (Eastern Garter-snake)**: VA, Culpeper County, 866 Virginia Avenue.5 June 2025. Michael Duff.

County Record: The Eastern Gartersnake is one of the most common snakes in Virginia. It has been documented in 87 of the 95 Virginia counties. It is a generalist species, being found in almost any type of habitat and consuming a wide range of prey (https://www.virginiaherpetologicalsociety.com/reptiles/snakes/eastern-gartersnake/index.php). Here, I report the first record of a Gartersnake from Culpeper County. On 5 June 2025 I was walking my dogs in our yard when a snake stuck its head up out of the grass in the yard. This was the first of this species I have seen at our property. It is reported from all surrounding counties, and was the last county in northern Virginia to receive a record for the species. I photographed the snake and sent a copy to the Virginia Herpetological Society (VHS Archive #860).

Michael Duff
Culpeper, VA

***Thamnophis sirtalis sirtalis* (Eastern Gartersnake)**: VA. City of Portsmouth, Defense Fuel Support Site Craney Island (36.88779°N; 76.36607°W) on 6 May 2025. Christopher E, Petersen.

City Record: While performing a herpetological survey of Navy property on Craney Island, I encountered a pre-shed snake basking at a treefall site on the edge of forested habitat. The snake was photographed and determined to be an Eastern Gartersnake. This species is a new record for the City of Portsmouth. This occurrence helps fill a gap in the distribution of this species in the southeastern corner of Virginia since it is recorded in every surrounding city and county. The weather on 6 May consisted of mostly sunny skies with a high temperature of (26°C). A digital photograph was submitted to the VHS archive (#876) as a voucher.

Christopher E. Petersen
Chesapeake VA

***Thamnophis s. sirtalis* (Eastern Gartersnake)**: VA. City of Roanoke, Fern Park, 2875 S. Jefferson Street. 2 November 2025. Eric Amateis.

City Record: The Eastern Gartersnake is one of the more common snakes in Virginia. It is found in a wide variety of habitats and consumes a wide variety of prey (https://www.virginiaherpetologicalsociety.com/reptiles/snakes/eastern-gartersnake/index.php). It has a state-wide distribution and has been reported from 87 of the 95 counties and 15 cities (Op. cit.). I was out running on the Fern Park trail in the City of Roanoke and saw a snake ahead of me on the trail. I obtained a photograph of the snake and identified it as an Eastern Gartersnake. I noticed that the VHS did not have a voucher for this species from the City of Roanoke, although it is reported from Roanoke County which surrounds the city on all sides. I sent the photo to the VHS as a voucher for this observation (Archive #901).

Eric Amateis
Roanoke, VA

***Virginia striatula* (Rough Earthsnake)** VA, City of Portsmouth. Defense Fuel Support Site Craney Island (38.89146N, 76.37814W). 19 September 2025. Christopher Petersen.

City Record: The Rough Earthsnake has a Virginia distribution in the southeast portion of the state (https://www.virginiaherpetologicalsociety.com/reptiles/snakes/rough-earthsnake/index.php). It is one of a large group of small, secretive terrestrial snakes more often found under cover objects than out in the open. Their primary prey is earthworms although they have been reported to consume a variety of invertebrates (Op. Cit.). On 19 September 2025 while performing a herpetological survey of the Defense Fuel Support Site on Craney Island, I found a Rough Earthsnake under loose bark of a cut log located within a powerline right of way. The snake was photographed and the digital photo submitted to the VHS (Archive #880). This record helps fill a distribution gap in the southeastern corner of the state.

Christopher Petersen
Portsmouth, VA

***Virginia striatula* (Rough Earthsnake)**; VA. Petersburg City, Friends of the Lower Appomattox River, 235 N. Market Street, (37.1352, -77.2425). 1 October 2025. Isabella Canovas.

City Record: The Rough Earthsnake is native to the southeastern portion of Virginia. Even there it has a spotty distribution, likely because it is a terrestrial species most often found, when encountered, under various types of cover objects (https://www.virginiaherpetologicalsociety.com/reptiles/snakes/rough-earthsnake/index.php). They are found from early March through late November (op cit.) but infrequently after July when the hot dry weather predominates. Their primary prey is earthworms, which would abound under cover objects.

On 1 October I was visiting the FOLAR headquarters in Petersburg, and the staff were showing me their plans for a native plant garden on a corner of their urban plot. The garden had many layered debris, and upon flipping the landscaping fabric layers, I discovered two adult and two subadult Virginia striatula. The snakes were very active and spread out across the small garden plot. The property that they were found on is bordered on all sides by roads and is privately owned. Before all the snakes took off, I was able to photograph one (VHS Archive #896) as a voucher. This is the first record of the Rough Earthsnake and helps fill a gap in the distribution in southeastern Virginia.

Isabella Canovas
Petersburg, VA

***Aspidoscelis sexlineata* (Eastern Six-lined Racerunner)**: VA, Norfolk City, Naval Station Norfolk (36.9214; -76.27633194). 23 July 2025. Christopher E. Petersen.

City Record: The Eastern Six-lined Race-runner is an inhabitant of open xeric habitats (https ://www.virginiaherpetologicalsociety .com/reptiles/lizards/eastern-six-lined-racerunner/index.php) where they can see and outrun potential threats. They are particularly abundant in hot sandy areas in the Coastal Plain (op. cit.). Like most lizards they consume a wide variety of invertebrates and are active hunters, using speed to capture prey. Their range in Virginia includes scattered counties and cities in the Piedmont and Coastal Plain. This report is the first in the city of Norfolk. I am currently conducting a survey for amphibians and reptiles on Naval Station Norfolk. As part of that survey, on 23 July 2025 I found an Eastern Six-lined Racerunner on the Naval Station Norfolk on an asphalt driveway under a semi-trailer. I obtained a digital photograph and sent it to the VHS as a voucher for this record (VHS Archive #866). The weather at the time was 29°C and partly cloudy.

Christopher E. Petersen
Chesapeake. VA

***Hemidactylus turcicus* (Mediterranean House Gecko)** VA: RadfordCity. Radford University, Floyd Hall, basement. 37°08'15.08"N 80°33'00.3"W. 6 October 2019. Karen E. Powers

City Record: Mediterranean House Geckos (*Hemidactylus turcicus*) are an introduced species documented by the Virginia Herpetological Society in 9 counties and 13 cities in Virginia (https://www.virginiaherpetologicalsociety.com/reptiles/lizards/mediterranean-gecko/index.php). I submit proof of these geckos in Radford City via a collected specimen. This specimen, RU14531, has been in the Biology Department's natural history collection for nearly 6 years (Figure 1; VHS Archive #871). More recently, I noted a live but lethargic gecko outdoors on 6 March 2024, along the exterior of Floyd Hall; however, the same individual was found deceased in the same location the following day. Due to its missing tail and poor specimen quality, it was not collected. However, typical indoor sightings have been most common in early fall each year, when ambient nocturnal temperatures drop. Students find these geckos in stairwells and hallways of our science complex, and alert me of the geckos' presence.

Mediterranean House Geckos have been observed in neighboring Montgomery County, Virginia as recently as 3 August 2025 (personal observation; RU18497), but had not been reported in Radford City. Given my numerous personal sightings of Mediterranean House Geckos at Radford University over the last 15 years, there appears to be a resident population thriving in and among campus buildings.

Karen E. Powers
Radford University
Department of Biology
Radford, VA 24142

***Ophisaurus attenuatus longicaudus* (Eastern Slender Glass Lizard);** VA, Virginia Beach, False Cape State Park, Wash Woods beach access. 2 August 2025. Megan Goin.

City Record: The Eastern Slender Glass Lizard is found throughout the Coastal Plain of Virginia (Mitchell and Reay. 1999. Atlas of Amphibians and Reptiles in Virginia. Special Publication Number 1, Virginia Department of Game and Inland Fisheries. 122pp.). They are found on dry, well drained soils (https://www.virginiaherpetological society.com/reptiles/lizards/eastern-slender-glass-lizard/index.php) primarily in grasslands where they consume a wide variety of invertebrates but seem to prefer grasshoppers (Op. Cit.). On 2 August 2025 I was hiking in False Cape State Park, resting on the sand when I saw what at first I took for a snake. Upon closer observation I saw it was a legless lizard. I was able to obtain a photograph (VHS Archive #878) and sent it to the VHS. I was informed there were no previous records of the Eastern Slender Glass Lizard from Virginia Beach. This observation helps fill a distribution gap in the very southeastern portion of the state. The weather was clear and windy with a temperature of 27°C.

Megan Goin
Front Royal, VA

***Ophisaurus attenuatus longicaudus* (Eastern Slender Glass Lizard);** VA, Cumberland County, Intersection of Sports Lake and Tatum Roads. 27 June 2024. Levi Barr.

County Record: The Eastern Slender Glass Lizard is found primarily in eastern portions of Virginia. They are typically found in grasslands where they prey on a variety of invertebrates (https://www.virginiaherpetologicalsociety.com/reptiles/lizards/eastern-slender-glass-lizard/index.php). They are not often seen since they spend a great deal of time in rodent burrows and under clumps of dead vegetation (Op. Cit.). On 27 June 2024 I was looking for herps near my house and found an Eastern Slender Glass Lizard in the road. I sent a copy of the photograph to the VHS (Archive # 877) as a voucher for this observation. There was no previous record for Cumberland County although there is for the adjacent counties of Amelia and Powhatan. The weather at the time was sunny.

Levi Barr
Cumberland County, VA

***Scincella lateralis* (Little Brown Skink)**: VA, Botetourt County, Patterson Creek Trail in the Jefferson National Forest. 14 June 2025. Kelly Clinevell.

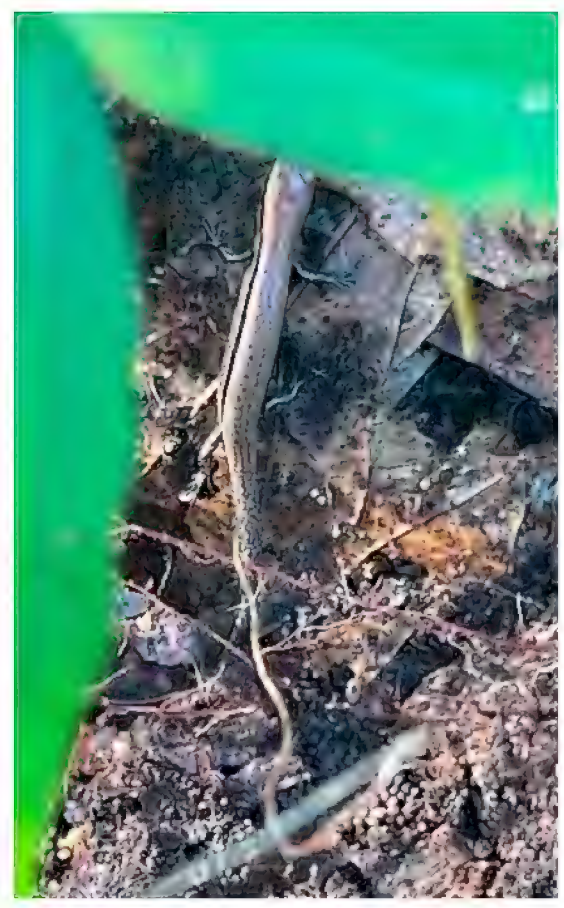
County Record: The Little Brown Skink is a common lizard in the Coastal Plain and Piedmont of Virginia. It is a predator of a wide variety of invertebrate prey living in the leaf litter of forests. On 14 June 2025, I was in the Patterson Creek Trail area of the Jefferson National Forest in Botetourt County when I encountered a Little Brown Skink under a cover object. I noted that the VHS website did not include Botetourt County in the range of this species so I sent a photo to document this species (VHS Archive #861). It has been reported from Bedford County to the east of Botetourt, but not in any of the counties to the north, west or south. This record helps fill a gap in the distribution for this species.

Kelly Clinevell
Salem, VA

***Scincella lateralis* (Little Brown Skink)** VA. Petersburg City, along the Appomattox River Trail just below Virginia State University (37.23190, -77.41809). 1 October 2025. Courtney Whisenant.

City Record: The Little Brown Skink is typically found throughout the Coastal Plain and Piedmont of Virginia. Its preferred habitat is on the forest floor on and under leaf litter where it preys upon all types of invertebrates (https://www.virginiaherpetologicalsociety.com/reptiles/lizards/little-brown-skink/index.php). They have been reported from urban areas (op cit.). On 1 October 2025 I was flipping logs along the Appomattox River Trail, just below Virginia State University, at the Fall Line. Upon flipping a log, a subadult S. lateralis ran out from the log and into the grass. I was able to obtain a photograph before it disappeared (VHS Archive #897). The skink has been reported from all the counties surrounding Petersburg, but not the city itself. This record thus helps fill a gap in the distribution of this lizard.

Courtney Whisenant
Petersburg, VA



***Chelydra serpentina* (North American Snapping Turtle)** VA: Montgomery County. Selu Conservancy, Little River 37°04'38.1"N; 80°33'52.1" W. 7 June 2025 S. Draven Vannoy, Karen E. Powers, Sora L. Powers

Behavior: We canoed the Little River along the property boundary of Radford University's Selu Conservancy on 7 June 2025. At 16:25h, we documented a Common Snapping Turtle (*Chelydra serpentina*) basking on a partially submerged log in the river channel, less than 5m from the stream bank. In the same reach, several Eastern Painted Turtles (*Chrysemys picta*) basked alone or in pairs on floating woody debris. However, a Common Snapping Turtle did not share the log with other individuals. As our canoe descended upon the turtle, we photographed it (VHS Archive #869) and it dropped into the water. Ambient temperature was 23.3 °C with winds 9.7 km/h from the west. Weather for 7 June included a mix of moderate and light rain showers until early afternoon, with occasional respite from precipitation. At the time of this observation, the sky was mostly cloudy.

While not an entirely novel occurrence, this behavior in snapping turtles is uncommonly reported in the literature. Snapping turtles have been documented basking on logs (Obbard, Martyn E., and Ronald J. Brooks. 1979. "Factors affecting basking in a northern population of the common snapping turtle, *Chelydra serpentina*." Canadian Journal of Zoology 57(2):435-440) and anthropogenic structures (e.g., concrete; Elsey, Ruth M and Steven G. Platt. 2021. "*Chelydra serpentina* (Snapping Turtle). Basking." Herpetological Review 52(1):628) but this behavior appears unreported in Virginia. While Eastern Painted Turtles regularly bask diurnally to regulate body temperature, Common Snapping Turtles bask uncommonly (Ernst, Carl. H. and Lovich, Jeffrey E. 2009. Turtles of the United States and Canada, 2nd ed. Johns Hopkins University Press, Baltimore, Maryland. 827 pp.). Snapping turtles tend to bask alone (Weber, Andrew S. and James B. Layzer. 2014. "*Chelydra serpentina* (Snapping Turtle) Interspecific Basking. Herpetological Review 45(1):117) and generally on natural structures 0-1m above the waters' surface (Hartzell, Sean M. 2015. "*Chelydra serpentina* (Snapping Turtle) Basking Height." Herpetological Review 46(2): 42). Our observation of this basking behavior highlights the need to quantify occurrences of Common Snapping Turtle basking in Virginia. Reporting uncommon baseline behaviors like these may encourage researchers to quantify changes in behavior in light of changing landscapes and climate.

S. Draven Vannoy, Karen E. Powers
Radford University
Department of Biology
Radford, VA 24142

Sora L. Powers
Blacksburg, VA 24060

Kinosternon subrubrum subrubrum (Southeastern Mud Turtle): VA. City of Portsmouth, Defense Fuel Support Site Craney Island (36.88835°N; -76.36227°W) on 4 April 2025. Jeffrey W. DeBerry.

City Record: While performing a herpetological survey of naval property on Craney Island, I encountered a turtle moving in the vegetation of a small stormwater wetland. Upon capture and examination, it was determined to be Southeastern Mud Turtle. Many others have since been found on this naval installation. Although this species has confirmed occurrences throughout eastern and central Virginia, this is a new record for the City of Portsmouth. This occurrence helps fill a gap in the distribution of this species in the southeastern corner of Virginia. The weather on 4 April consisted of cloudy skies with a high temperature of (31°C). A photograph was submitted to the VHS (Archive #872) as a voucher.

Jeffrey W. DeBerry
Chesapeake VA

***Pseudemys concinna concinna* (Eastern River Cooter)**: VA, Bedford County, US 460/4827 E Lynchburg-Salem Turnpike. 9 August 2025. Diana Leder.

County Record: The Eastern River Cooter is a large turtle with a wide distribution in Virginia (https://www.virginiaherpetologicalsociety.com/reptiles/turtles/eastern-river-cooter/index.php). There are records of the Cooter scattered throughout the state, with most found in the Piedmont. They are typically found in large rivers, but can also be found in lakes and large ponds (op. cit.). On 9 August 2025 Diana Leder was driving down US 460/the E Lynchburg-Salem Tpke when she spotted a turtle on the side of the road. She turned around to make sure it wasn't still alive. His head had been crushed, but the back legs were still kicking, so she marked his location and rushed him to the SWVA Wildlife Center for treatment. Due to the severity of the head damage the turtle had to be euthanized, given the graveness of his wounds. Initially, it was thought the turtle was *Chrysemys picta* but the Wildlife Center thought it was an Eastern River Cooter. Photos were sent to the Virginia Herpetological Society for confirmation on the identity. From the photos (VHS Archive #865), it was determined the turtle was indeed an Eastern River Cooter. Many of the surrounding counties have verified records, but there was not one for Bedford so this observation fills a gap in the distribution in central Virginia.

Kayla Short
Southwest Virginia Wildlife Center
Roanoke, VA

***Sternotherus odoratus* (Eastern Musk Turtle)**. VA: Salem City. Roanoke River at Apperson Drive (US 11)(37.2718883, -80.03877). 16 September 2025. Zachariah D. Alley, William C. Brunjes, and C. Michael Stinson.

City Record: During the afternoon of 16 September 2025, we were removing fish from the Roanoke River in Salem as part of a permitted in-stream work project. While capturing the fish from a pool of water that had collected around the base of a bridge pier, we noticed a turtle swimming in the water. Eventually Brunjes netted it, and we were able to identify it as an Eastern Musk Turtle. We photographed the turtle before releasing it outside of our work area and have included one of our images for documentation (VHS Archive #886). Review of our images show the turtle's carapace length to have been approximately 120 mm. After consulting the range map and other information on the website of the Virginia Herpetological Society (VHS) (https://www.virginiaherpetologicalsociety.com/reptiles/turtles/stinkpot/index.php, accessed 17 September 2025) as well as information provided on Virginia Department of Wildlife Resource's (DWR) Virginia Fish and Wildlife Information Service site (https://services.dwr.virginia.gov/fwis/booklet.html?Menu=_.County+Abundance&bova=030052&version=20349, accessed 18 September 2025), this turtle appeared to represent a first record of its species for the city of Salem. There was also no record for the city of Roanoke listed on either the VHS or the DWR websites, though the border between the two cities at the point where the river passes from Salem into Roanoke is slightly over 2 km (1.25 miles) away in a straight line, or 2.85 km (1.77 miles) along the river, as the turtle swims. According to the VHS and DWR websites, the species has been documented in Roanoke County, which surrounds these two cities, suggesting, together with this report, that the presence of Eastern Musk Turtles in Roanoke City is also possible, if not likely.

Zachariah D. Alley, William C. Brunjes, and C. Michael Stinson
EDGE Engineering and Science,
Cincinnati, OH

***Terrapene carolina* (Woodland Box Turtle)**: VA, Middlesex County, Church View, 2379 Wares Bridge Road. 26 June 2025. Ian and Brittany Adrian.

County Record: The Woodland Box Turtle is the most prevalent turtle in Virginia. It has been documented in all Virginia counties except Middlesex and Highland. Here we report a Woodland Box Turtle from Church View in Middlesex County. On 26 June 2025 we heard some noise in dense brush beneath a thick stand of blackberries. Investigating more closely, we found a beautiful box turtle. We photographed the turtle and sent a copy to the Virginia Herpetological Society (VHS Archive #862). This now leaves only Highland County without a verified record for the Woodland Box Turtle in Virginia.

Ian and Brittany Adrian
Church View, VA

***Terrapene carolina* (Woodland Box Turtle)** VA, Highland County, Highland Wildlife Management Area, near intersection of Buckhill and Davis Run Roads (38.31966664650566, -79.54497296355774) 14 July 2023. Gene Sattler.

County Record: The Woodland Box Turtle is the most commonly found turtle in Virginia. It has a state-wide distribution (https://www.virginiaherpetologicalsociety.com/reptiles/turtles/woodland-box-turtle/index.php). I was told by Paul Sattler that Highland County was the only Virginia county without a verified record for the Woodland Box Turtle. Knowing that I taught science at the Machen Retreat and Conference Center in Highland County, he asked if I had ever photographed Box Turtles in the area. Looking back through old photographs, I found a photo of one from 14 July 2023 (VHS Archive #899) which I submitted as a voucher for this observation. This turtle was found near the edge of an old field and a woodland. The Woodland Box Turtle with this report and that of Ian and Brittany Adrian (2025. Field Note *Terrapene carolina*. Catesbeiana 45(2): 116) becomes the second reptile which has been verified in all 95 counties in Virginia. The Northern Watersnake, *Nerodia sipedon* being the first.

Gene Sattler
Department of Biology and Chemistry
Liberty University
Lynchburg, VA

***Terrapene c. carolina* (Woodland Box Turtle)**: VA, Montgomery County Dry Run Rd, Blacksburg VA (37.276470, -80.312544). 17 October 2025. Robyn Lickert.

Size Record: The Woodland Box Turtle is found throughout Virginia, being the most commonly found turtle in the state (https://www.virginiaherpetologicalsociety.com/reptiles/turtles/woodland-box-turtle/index.php). Mitchell and Foertmeyer (2015. Terrapene carolina carolina Field Note. Catesbeiana 35(1): 34-35) discussed the size of Box Turtles and reported a new size record for Virginia with a male from Richmond, at 158.2 mm. This turtle had been raised in captivity for the previous 11 years, and captive rearing is known to increase size because of the additional food received by captive animals over natural ones. Here we report a new size record for a male Woodland Box Turtle, this one found in the wild. On 17 October 2025 Robyn Lickert was delivering for InstaCart, went up a gravel road and stumbled onto a Box Turtle in the road. She went to move the turtle and noticed that he had an injured foot. The habitat in which the turtle was found was very wooded with a small creek below the road which had gone dry. She took the turtle to the Southwest Virginia Wildlife Center to care for the foot. The foot had gone necrotic and r equired amputation up the femur, but his prognosis for recovery is hopeful! We noticed that this turtle was HUGE, so we measured his straight line carapace length and found it was 161.5mm (VHS Archive #903). This is an increase of 3.2 mm over the previous record.

Kayla Short
SWVA Wildlife Center
Roanoke, VA

and

Robyn Lickert,
Christiansburg, VA

President's Corner

Greetings fellow herpers,

I would like to thank all of those that came out to the Annual Fall Meeting. We had over 80 people attend (at least by the mid-day count) including those that attended online. Personally, it was great connecting with new people, those I haven't seen in a while, and to have more in-depth conversations with folks I've met in the field, but didn't have the time to talk intimately. I would also like to extend a tremendous thanks to our outgoing president Arianna Kuhn who stepped up to finish out the 2023-2025 presidential term. In just a year's time she worked with Jason Gibson (Survey Committee/Averett University) to host the joint Spring Meeting and Survey with the North Carolina Herpetological Society. This is something we've been looking to do for years and she got it done! Arianna also recently moved to Illinois where she got an awesome job with Illinois Natural History Survey. Although she may be a bit further than we are used to, we know she will still be close. I would also like to shout out the executive committee for helping keep everyone on track when things change unexpectedly.

The Virginia Herpetological Society (VHS) had a great year in 2025. We had four surveys – the Spring Survey at Staunton River State Park and Staunton River Battlefield State Park (Halifax Co.) in May. In June, VHS led the Southeastern King George Survey at the Toby's Point Unit of the Rappahannock River National Wildlife Refuge and Land's End WMA (King George Co.) and Herp Blitz at Crooked Creek WMA (Carroll Co.). In September we had the Browne State Forest & Rotary Poor House Park Survey (Essex Co.). We also held elections during the business meeting before lectures started. The executive committee and membership elected Marshall Boyd to serve a full-term as vice president. Matt Close and Yohn Sutton will also continue as treasurer and secretary respectively. I was also elected as president of the VHS.

I would like to say hello to everyone and introduce myself to those who may have not met me. I grew up in the concrete jungle that is Arlington County, Virginia. I first became enamored with herps when I heard frogs calling with my dad around the age of five. I soon became addicted and spent my childhood spending as much time as I could outdoors hiking and herping. I first got my start with the VHS in 2013 when I was a zookeeper in the Department of Herpetology at Smithsonian National Zoological Park. After landing my dream job at the zoo, I was excited to get back out in the field where my initial interest for herpetology started. I also wanted to try and find species I had only dreamed about seeing (e.g. Yonahlossee Salamanders, Northern Cottonmouths, Red Cornsnakes). I attended almost every VHS survey in 2013 and found everything on my list that year, except cornsnakes… and still haven't so y'all need to help me out with that one! After becoming acquainted with the VHS, I quickly became more involved and served as vice president (2015-2017) and president (2017-2019). I love leading surveys and during my leadership roles led surveys at Quarry Gardens (Nelson Co.), Mole Hill (Rockingham Co.), Dixie Caverns (Roanoke Co.), Lake Anna State Park (Spotsylvania Co.), and Sky Meadows (Clarke and Fauquier Co.). A few goals of mine during my first presidential term were to survey counties that haven't been surveyed by VHS before (usually they had low documented herp species as well), continue to have the VP lead smaller, members-only surveys, give membership more opportunities to help with executive committee roles, and continue to fund large-scale, long-term projects like Joe Mitchell's bibliographies of Virginia's

herpetofauna. While new people became involved with the VHS and membership increased by 50%, the committees didn't have increased participation or grow as I had hoped – with exception to the Education committee's 20 members.

Since ending my term as president at the end of 2019, I have still been an active survey leader and led surveys at Lake Anna or Caledon State Park. In 2022 I moved to Southern Maryland to be the Curator of Estuarine Biology at the Calvert Marine Museum. I have already opened a few new exhibits and finished some cool projects, but that's for another article and another time. While I may be in another state, VHS and Virginia herps have always been near and dear to my heart and I have continued to lead surveys in Virginia's Northern Neck and Middle Peninsula over the past few years – King George Co. (Caledon State Park, Rappahannock River National Wildlife Refuge, Land's End Wildlife Management Area) and Essex Co. (Rotary Poor House Park and Browne State Forest).

I am enthusiastic to step back up and serve as president and am encouraged at people that have approached me during surveys about being more involved with the society. If you would like to be more involved and are currently a member of VHS, reach out! Thanks to those that have already done so and I'm looking forward to seeing in what capacity you'd like to participate and what committees would be a good fit. My hope with this is that in the future when abrupt changes happen with the society there will be more than enough "newbies" with expertise under their belts to help steer the ship and jump into leadership roles.

I would like to continue to survey counties that have not been surveyed by the VHS before. To make this easier to visualize, you can see our gaps in Fig. 1 below. I will note that some of the blank counties, like Culpepper and Orange, do not have a ton of public land so there are less chances to document herpetofauna. In the past few years, we have surveyed new counties like Spotsylvania, Clarke, Fauquier, Stafford, and Essex.

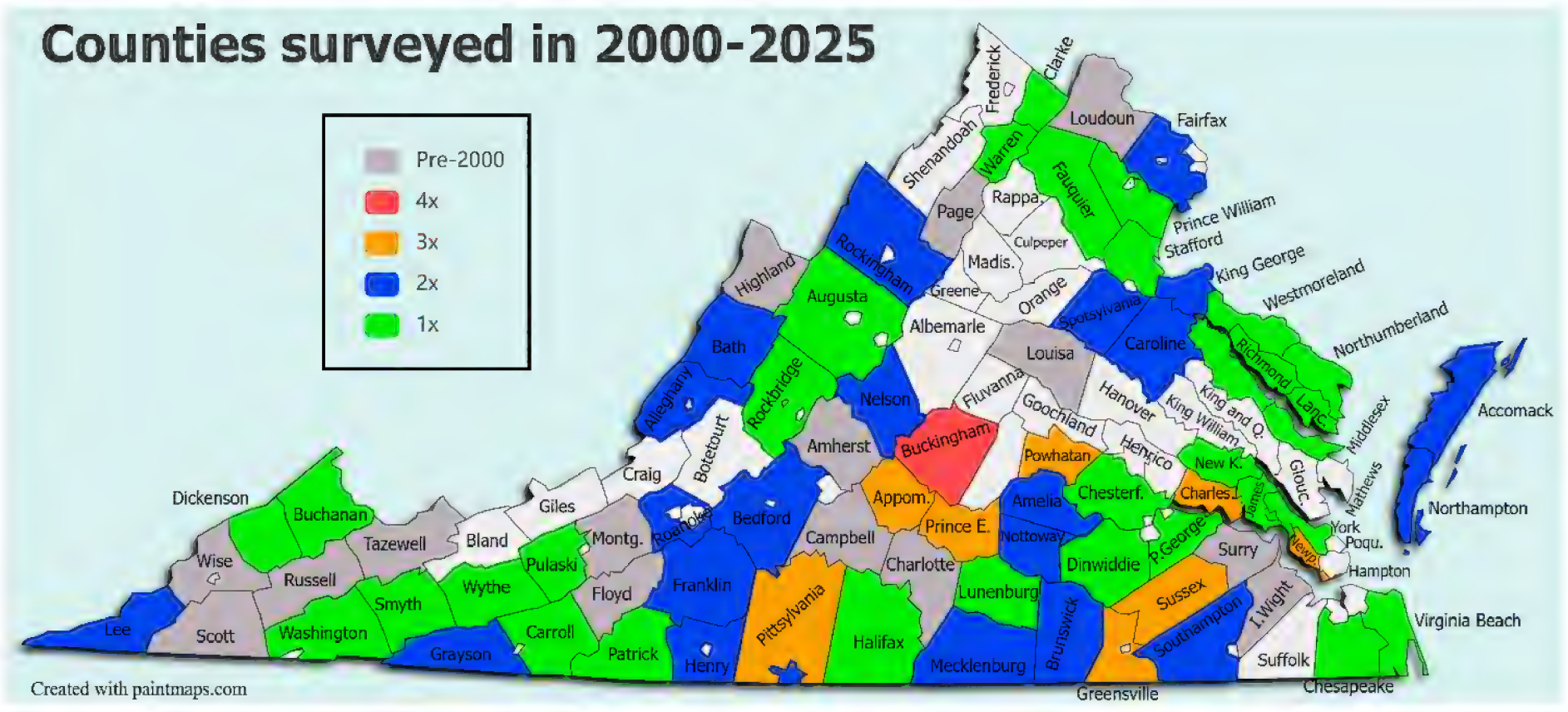


Figure 1. Counties in Virginia that have been surveyed by the VHS

I am starting to locate properties in some of the un-surveyed counties above – these would be great for smaller, members-only surveys. I've had a few folks ask about additional survey opportunities across the state, in addition to the Spring Survey and Herp Blitz I would also like to have an additional survey occur through the spring and fall. Historically the VP led a smaller members-only survey, but this tradition faded after the pandemic. I am planning to work with the VP and interested parties on the entire process of setting up, organizing, conducting a survey, and authoring the results. This will help if they decide to take a leadership role in the future. In turn, this will also give membership access for more opportunities to be out in the field.

Also, I have also been going through the minutes in *Catesbeiana* and have noted that there are a few surveys that need to get written up. It's a hard task of planning and conducting a survey and can seem daunting to write up. Even if only common species are documented, it is still important information. It is also important getting baseline information on herpetofauna that occurs in a new state park or compare results of what was found compared to a survey hosted 10 years prior. I am currently working with VHS member Jake Galla in writing up the Widewater State Park Survey from 2022. I enjoy writing (clearly as I'm on word 1,230 of the President's Corner), but I also enjoy teaching, and I would be happy to help write up the surveys with a coauthor. There is still the Brownsville Preserve survey outstanding. If you have a knack for scientific writing, please reach out and be a co-author with me.

Over the years we have funded some awesome grant projects and it would be awesome to give some of the awardees the opportunity for more funds to further help them complete their goals. This could also open us up to larger projects. During the past meeting we were able to increase our grant amounts for up to $1,000. I think this will go a long way and I believe we will get some interesting projects coming down the pike.

I have a few ideas for areas to survey for the Spring Survey, so stay tuned…I am ready for 2026 and hope to see y'all out in the field soon!

Matt Neff
VHS President

Virginia Herpetological Society
Minutes of the 8 Nov 2025 Business Meeting
Virginia Department of Wildlife Resources Building
Henrico, Virginia

The 2025 Fall Virginia Herpetological Society meeting was located at the Department of Wildlife Resources (DWR) office in Richmond, Virginia on November 8, 2025. Committee members in attendance were presiding President Arianna Kuhn, Vice President Marshall Boyd, Treasurer Matthew Close, Secretary and conservation chair Yohn Sutton, Education chair Caroline Seitz, Outreach coordinator Kelly Geer, Permits coordinator Susan Watson, *Catesbeiana* chair Paul Sattler, Grants chair Kory Steele, and Bylaws committee chair Erin Anthony.
Leadership started with elections for a new President to be vacated in the year 2026. A motion to elect Matt Neff was initiated and voted unanimously. Since the president position was vacated, a move to nominate a vice president was also initiated. The current position filled by Marshall Boyd, was moved to continue and approved unanimously. Congratulations to Matt Neff and Marshall Boyd for continuing the leadership of the Virginia Herpetological Society. Thank you to Arianna for the leadership you have provided during your term as President.

Arianna briefly discussed the new editions of the DWR wildlife guides available for purchase. The Salamander of Virginia guide has been updated and available for purchase.

Kory Steele with the grants committee suggested including members in emails advertising the VHS ability to supply grants for research and conservation efforts in Virginia. Currently, the distribution list of applicants is slim, and a wider audience is needed. The current amount VHS will fund is grants up to 500.00 dollars per applicant. A proposal to increase the maximum grant amount from 500.00 to 1000.00 to gain interest from applicants and cover ecological studies costs was made. Treasurer Matt Close affirmed that the VHS could afford to increase funds since 500 seem disproportionate currently. The amount for research can be funded up to 2000.00 with committee approval. The motion to increase grant amounts was approved. Applicants interested in receiving assistance with research regarding Virginia herpetofauna should contact the grants committee at grants@vaherpsociety.com.

Treasurer Matthew Close discussed the year-to-date report for FY2025. The budget of 7000.00 is created from the dues and donations that the society gains from members and events accomplished throughout the year. There was an unexpected budget overage for the spring meeting in 2025. Due to the size of having two herpetological societies in one meeting promoted both money gained from the success of the spring session and a recalculation of budgeting for future events. Education also exceeded the budgeted amount for FY2025 originating from the mileage reimbursements applied to education member traveling further than twenty-five miles to event sites. Matthew has drafted a future Travel and Procedure policy and requested a peer review to ensure accuracy for society use. Conservation funds allocated in the budget have not been utilized and may be encumbered into the education fund in the future. Two frog-loggers were purchased for 700. Money that went into a cash deposit account for six months yielded an additional

amount of 683.56 dollars and the renewal for this will be in April. Lastly, a question to cap grant proposals and increase the research budget to 3000.00 dollars was made. The increase for research funding was approved, and grant submission cap was tabled due to the lack of inquiries for grant funding.

Paul Sattler requested minutes from the fall 2025 meeting, president's corner, and treasurer reports as soon as possible to be included in *Catesbeiana.* Several survey reports from 2025 are ready for publication in *Catesbeiana* already. An inquiry on iNaturalist records as official field notes for county records was initiated. The response was that iNaturalist data is not adequate for accuracy; and an official policy would need to be implemented to secure reliability in location data. Currently, survey records and public submissions are reviewed and approved by the DWR for accuracy. Publications need a clear source of authenticity; the current discussion was adjourned and a working group to further discuss formalizing a policy and procedure has been opened for discussion. Other members of VHS are welcome to add input or request to be a part of a working group for this iNaturalist discussion.

Susan Watson updated our exhibitor's permits and sent those to the officers. Any additional amendments will need to be requested. All data from 2025 surveys need to be sent to Susan by January 2026. Collection permits are currently being renewed.

John White has no new updates for the website. A big thank you to John for the diligent work of keeping the website up-to-date.

Kelly Geer offered updates on the membership committee. This includes giving members access to a digital calendar to be updated on future VHS events. An inquiry about bringing back membership cards to members in a digital form as an incentive was approved and is currently in progress. Members are encouraged to include input on digital membership card designs. The VHS newsletter has not been active and may need to be omitted. As a replacement, Matt Neff suggested the use of blogs to communicate news to current members more regularly. Another option would be to send out brief email updates periodically. Beneficial content such as education opportunities to members from the Education Committee and future survey events were fundamental to the discussion.

Questions before the conclusion of the business meeting included increasing methods for survey participation. Sectioning the entire VHS into localized chapter to allow for more localized survey opportunities, and encouraging members with access to private land to initiate surveys. Susan responded that permitting will still be needed to accomplish this. Having understudies to assist committee members in various tasks would be beneficial. This is also in review. The meeting then concluded with a follow-up of a review of the education report submitted by Caroline Seitz and a brief talk from Matt Neff on Frogwatch and frog data loggers and their benefits.

Yohn Sutton
VHS Secretary

Virginia Herpetological Society
Treasurer's Report
December 3, 2025

Previous Balance- June 19, 2025	$	**16, 100.30**
Certificate of Deposit-Truist Bank (renewed 09/18/25)	$	10,651.06
Income		
Dues and Donations	$	4,740.14
Fall Meeting Revenue (Merch, Silent and Live Auctions)	$	2,095.75
CD interest	$	63.76
Expenses		
Operational Expenses		
Fall Meeting	$	941.38
Little Green Light	$	486.00
Education and Outreach	$	2,759.86
One-Time Expenses	$	151.66
Postage		1.32
Service Fees (Paypal, Stripe, etc.)	$	201.09
Current Gross Balance (12/03/2025)	$	29,819.41
Certificate of Deposit-Truist Bank (matures 02/18/26)	$	10,714.82
Additional Encumbered Funds (Outstanding Payments Issued)	$	709.71
Current Available Balance (unencumbered)	**$**	**18, 394.88**

VHS Memberships (dues current)

Regular	285
Student	44
Lifetime	113
Total	**442**

Matthew Close
VHS Treasurer

Field Notes

The Field Notes section of *Catesbeiana* provides a means for publishing natural history information on Virginia's amphibians and reptiles that does not lend itself to full-length articles. Observations on geographic distribution, ecology, reproduction, phenology, behavior, and other topics are welcomed. Field Notes will usually concern a single species. The format of the reports is: scientific name (followed by common name in parentheses), state abbreviation (VA), county and location, date(s) of observation, observer(s), data and observations. The name(s) and address(es) of the author(s) should appear one line below the report. Consult the editor if your information does not readily fit this format. **All Field Notes must include a brief statement explaining the significance of the record** (e.g., new county record) **or observation** (e.g., unusual or rarely observed behavior, extremely early or late seasonal record, abnormal coloration, etc.). Submissions that fail to include this information are subject to rejection. Relevant literature should be cited in the body of the text (see Field Notes in this issue for proper format). All submissions will be reviewed by the editor (and one other person if deemed necessary) and revised as needed pending consultation with the author(s).

If the Field Notecontains information on a **new county (or state) record**, **verification is required in the form of a voucher specimen** deposited in a permanent museum (e.g., Virginia Museum of Natural History) or a **photograph** (print, slide, or digital image) **or recording** (cassette tape or digital recording of anuran calls) deposited in the archives of the Virginia Herpetological Society. Photographs and recordings should be sent to the editor for verification and archiving purposes; the identity of voucher specimens must be confirmed by a museum curator or other qualified person. Include the specimen number if it has been catalogued. Prospective authors of distribution reports should consult Mitchell and Reay (1999. *Atlas of Amphibians and Reptiles in Virginia*), Mitchell (1994. *The Reptiles of Virginia*), and Tobey (1985. *Virginia's Amphibians and Reptiles: A Distributional Survey*) **[both atlases are available on-line on the VHS website]** as well as other recent literature to determine if they may have a new county record. New distribution records from large cities that formerly constituted counties (Chesapeake, Hampton, Newport News, Suffolk, and Virginia Beach) are acceptable, but records from smaller cities located within the boundaries of an adjoining county will only be published if the species has not been recorded from that county. Species identification for observational records (e.g., behavior) should be verified by a second person whenever possible.

PHOTOGRAPHS

High contrast photographs (digital images) of amphibians and reptiles will be considered for publication if they are of good quality and are relevant to an accompanying article or field note. Published photographs will be deposited in the Virginia Herpetological Society archives.

Paul Sattler, Editor
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